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ABSTRACT

Thirty-three active doctoral advisors on the faculty of a research oriented university participated in a study of the way faculty advisors prepare their doctoral candidates for the literature review portion of the dissertation. It is noted that common student opinions are: their own library use skills are inadequate; this inadequacy is shameful; and the inadequacy would be revealed by asking questions. The overall response pattern from the 33 advisors indicates the following beliefs and general advising procedures: (1) they consider refereed journals, books, dissertations, and ERIC the most productive bibliographic formats for the dissertation literature review in education; (2) they rank the literature review chapter the lowest of the five standard dissertation chapters when reflecting on their level of advising expertise and the amount of time they give to a chapter; (3) they rank the research/methodology chapter highest on both counts; (4) some of them have little knowledge of computerized searching technologies; (5) they expect their advisees to have bibliographic skills at the doctoral level; and (6) advisors should offer assistance after doctoral candidates do the literature review and return with the results. Study findings suggest that graduate programs should examine and update the doctoral advising procedures and policies, consider bibliographic instruction on par with research methodology instruction in the preparation of doctoral candidates, and reexamine the current admission policy. Two appendices provide a copy of the preliminary questionnaire and tables describing members of the study group. Contains 66 references. (Author/SM)

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THE DISSERTATION LITERATURE REVIEW: HOW FACULTY ADVISORS PREPARE THEIR DOCTORAL CANDIDATES

by

LAURENE ELIZABETH ZAPOROZHETZ

U.S. DEPARTMENT OF EDUCATION
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A DISSERTATION

Presented to the Division of Teacher Education
and the Graduate School of the University of Oregon
in partial fulfillment of the requirements
for the degree of
Doctor of Philosophy

August 1987

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Approved: Robert Sylwester

Dr. Robert Sylwester

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An Abstract of the Dissertation of

Laurene Elizabeth Zaporozhetz for the degree of Doctor of Philosophy in the Division of Teacher Education to be taken August 1987

Title: THE DISSERTATION LITERATURE REVIEW: HOW FACULTY ADVISORS PREPARE THEIR DOCTORAL CANDIDATES

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Thirty three active doctoral advisors on a College of Education faculty in a research oriented university participated in the study. They filled out questionnaires and participated in lengthy interviews in which they described how they advised their doctoral candidates on the literature review portion of the dissertation.

The overall response pattern from the 33 advisors indicated the following beliefs and general advising procedures. They rated 1) refereed journals, 2) books, 3) dissertations, and 4) ERIC, as the most productive bibliographic formats for the dissertation literature review in education. They ranked the literature review chapter the lowest of the five traditional dissertation chapters when they reflected on their level of advising expertise, and on the amount of time/energy they gave to a chapter. They ranked the research/methodology chapter highest on both counts. Some advisors, especially senior faculty, expressed distrust and little knowledge of computerized literature searching technologies. They expected their advisees to have bibliographic

skills at the doctoral level, even if the skills are not generally taught in graduate programs. Most advisors indicated they advised the way they were advised, reporting that they were left on their own to learn bibliographic skills during their graduate years. Overall, they felt doctoral candidates should go to the library to "do the literature review", come back with the results, and at that stage the advisor should offer suggestions and assist in writing and editing.

The findings suggest that graduate programs should 1) consider bibliographic instruction on a par with research methodology instruction in the preparation of doctoral candidates, and 2) update faculty advisors on new searching technologies in order to increase their advising effectiveness. New technologies for accessing bibliographic data, and the generally low level of advising for the dissertation literature review suggest many areas of further research.

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CHAPTER I

INTRODUCTION

Nature of the Problem

Doctoral candidates in most universities in the United States are required to complete a dissertation describing original research in order to complete requirements for the doctoral degree. This dissertation focuses on one aspect of the dissertation: faculty advising for the literature review.

The number of doctoral students in the United States is steadily growing. The Digest of Education Statistics (United States Department of Education, Office of Educational Research and Improvements, Center for Education Statistics, 1987) lists the total enrollment in doctoral programs for 1985 as 3,033,382, which represents a 2.4% percent change from 1979-1985 (Table 107, p. 126). Not all doctoral students become doctoral candidates, a status indicating they have completed coursework and passed appropriate examinations. Fewer candidates complete all of the requirements necessary to graduate. The Digest of Education Statistics (United States Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, 1987) lists the total number of doctoral degrees awarded for 1983-84 as 33,209 (Table 152, p. 174). A breakdown by field of

study indicates that 7,473 doctoral degrees in education were conferred in 1983-84 (Table 152, P. 175). Projections of Education Statistics to 1992-93 (United States, Department of Education,Office of Educational Research and Improvement, National Center for Education Statistics, 1985) projects 43,900 doctoral degrees will be awarded in 1992-1993 (Table B-17, p. 71). This means that an additional 43,900 dissertations are projected to be completed in 1992-93, and that 43,900 doctoral candidates and their advisors will struggle with the literature review portion of the dissertation.

All dissertations include a review of the literature. A current textbook in educational research introduces students to the literature review in the following way:

> The review of the literature involves locating, reading, and evaluating reports of research as well as reports of casual observation and opinion that are related to the individual planned research project. This review differs in a number of ways from the reading program often used to locate a tentative research project. First, such a review is much more extensive and thorough because it is aimed at obtaining a detailed knowledge of the topic being studied, while the reading program is aimed at obtaining enough general knowledge and insight to recognize problems in the selected area. (Borg & Gall, 1983, p. 141)

Light and Pillemer (1984) describe the initial problem for science graduate students beginning a literature review in their book Summing Up: The Science of Reviewing Research:

> What is known about the magnitude of the problem? What efforts have been made in the past to ameliorate it? Were they successful? Does existing evidence suggest any promising new directions? These questions demand some way to formulate "what we already know."
>
> Where can one turn for answers? Consider the graduate student . . . . Knowing that a good review of existing research should precede field work, he [sic] approaches his [sic] faculty

> advisor for guidance. How does a scientist conduct a research review? What are the essential steps?
>
> It is easy to imagine the student being slightly embarrassed to ask these questions, and the adviser feeling mild annoyance. Reviewing the literature is something a competent young scholar should know how to do. The professor's first reaction is likely to be that while the procedures are not carved in stone, some are quite standard. Go to the library. Use the social science abstracts. Thumb through current journals. Identify relevant articles. Briefly summarize them and draw some coherent overall conclusions.
>
> Yet if the faculty member is pressed to give explicit guidelines, her [sic] annoyance may turn to frustration. How can relevant articles be identified? Which of tens of hundreds of studies of programs for the elderly should a summary present? How should conflicting findings from different studies be resolved? Trying to answer these questions may make it clear that the professor's "scientific" procedures are implicit rather than explicit, as much art as science.
>
> Feeling this frustration, the faculty adviser takes the offensive. The absence of formal reviewing procedures is an inconvenience, but this does not undermine the research process. New research is the basis of scientific achievement. A research review is a chore to dispose of as quickly and painlessly as possible, usually by delegating it to subordinates. The student meekly replies that his [sic] new research will soon be somebody else's old data, receiving short shrift in a review article. But the lesson has been passed on to a new generation of scientists. (pp. 1-2)

This study investigates how faculty advisors in a college of education prepare their doctoral candidates for the literature review portion of the dissertation. Advisors have different ways of assisting and preparing their doctoral candidates for the various portions of the dissertation. How do the advisors prepare their advisees for this portion of the dissertation, using the assumption that the majority of advising is done from the advisor's office? How detailed is the information they receive about the candidate's exploration of the research topic in the library? How much do they want to know about the candidate's exploration while trying to locate

information? Is the process of location of information important to the advisor? How much time overall do they spend with the advisees on this portion of the dissertation? Is their time better spent discussing other things while they are with their advisees?

The origins of this study come from my personal experience as a university reference librarian. In this capacity, I have worked with faculty and students for periods of time ranging from five minutes to six years. I have assisted thousands of graduate students in teaching them the process of locating appropriate resources for term papers, masters theses, masters synthesis papers, comprehensive examinations and dissertations.

In assisting doctoral candidates who are completing the literature review portion of the dissertation, I have observed that they come to the university library with a wide range of experiences, directions from advisors, expectations, and myths. Their knowledge about the literature review process seems to be based on high school or undergraduate level term paper library skills. They may not be aware that more specialized tools exist for their subject areas, or they may feel that their topic is not sophisticated enough to warrant use of sophisticated tools.

Doctoral candidates usually have professional experience in responsible positions prior to being accepted in a doctoral program. It is difficult to return to school, to be just another common graduate student, and to have to ask questions. This is most difficult they have been employed in responsible positions, where

questions were not necessary to function at a most basic level. During times of self disclosure, doctoral candidates often will say that they "feel stupid" in a library. They will say that they feel that they "should know how to use a library by now." They continue to play these tapes in their heads and further convince themselves that failure is the appropriate behavior within library walls. Common behaviors I have observed range from self-abusive, self-inflicted negative attitudes and behavior toward the library, to library-phobia, a trembling from fear as the person comes near the library building. Constance Mellon (1986) completed a qualitative study with six thousand students in composition courses to explore the feelings of students as they did research in an academic library for the first time. Three concepts emerged from the descriptions provided by the students: (a) students generally feel that their own library-use skills are inadequate while the skills of other students are adequate, (b) the inadequacy is shameful and should be hidden, and (c) the inadequacy would be revealed by asking questions. From the data collected, Mellon developed a grounded theory of library anxiety, that when confronted with the need to gather information in the library for their first research paper many students become so anxious that they were unable to approach the problem logically or effectively (1986, p. 163). Mellon's "library anxiety" theory could easily be applied to doctoral candidates, who to dissertation research. That is, the doctoral candidates feel that others (faculty advisors, other doctoral candidates, etc.) think they should know how to use the library

appropriately and that asking questions would lead to a revelation of their incompetence.

Many doctoral candidates consider the library a terrifying place simply because they do not have appropriate skills to use it effectively. Library skills are not in the list of basic required courses such as introductory statistics or beginning research methodology. In a university library, doctoral candidates are left on their own, often both mystified and intimidated. They may spend hours at the card catalog (the library where this study was done was not automated), with no idea that The Library of Congress List of Subject Headings (United States Library of Congress, 1986) provides a list of terms that could help them verify terminology used for their topic. Therefore, something which appears as simple as locating books on a topic, after not finding anything under what the candidate feels is the best and most direct term in the catalog, leads to the false conclusion that "no information exists," when the problem is that the term used in research may not have conformed to the subject headings used in the catalog. When informed of such reference tools, librarians routinely see a range of emotions from doctoral students from tears, ("you mean the past three weeks of searching I did was not covering everything?") to anger, ("why isn't this made more clear?"). The most common misunderstanding is that all of the information needed is in the card catalog. Once a doctoral candidate is corrected--with a statement something as simple as clarifying that "no, individual journal articles are not listed in the card catalog"--it may be

devastating. Doctoral candidates, to persons not in positions of authority regarding their future such as librarians, appear anxious and concerned about being left on their own to complete the literature review.

The problem often is intensified because doctoral candidates typically have limited experience in working with sources located in a university research library. The sources used for a dissertation, such as Dissertation Abstracts International (1966-to date), are not typically found in a local school or public library. In addition, doctoral candidates usually do not have experience working with computer searchable databases or the developing laser disc and compact disc retrieval systems. The current popular computer press pushes the advantages of searching at home with personal computers, but it does not focus on proper explanation of the necessary preparation and practice, nor does it emphasize that fact that information is currently considered to be a commodity that must be purchased, and that users will receive a bill for the information received.

Since the mid-1960s bibliographic information has become available in machine readable forms. This means that the information typically printed in a paper index also is loaded in a form that can be read by a machine. Most recently, the world of information retrieval through computerized bibliographic information retrieval, commonly referred to as the "computer search," has changed drastically the procedures used to review the literature. Instead of an index, a candidate will now be encouraged to work with a database. Very

similar to an index, a database is a collection of information on a particular subject or subject area. This collection of data could range from citations to journal articles, to statistical tabulations to research in progress that may never be completed. Many databases are accessible only by computer and have no paper counterpart. Candidates work with a librarian or information specialist to structure a search strategy--a basis for telling the computer how to look for information on their topic. Groupings of subject headings and key words are made to describe the various aspects of the topic and to delineate aspects of the topic not required (for example, if the person can only read materials in English, all foreign language materials would be deleted). The jump from conceptualizing a topic to reducing it to a series of words for which a computer will search is very difficult for most doctoral students. New databases are being developed on a continuing basis, and the number is constantly growing. The Directory of Online Databases (1987) lists and describes 3,369 accessible databases. Table 1 charts the overall growth in the online database industry.

The tremendous growth, most noticeable in the number of databases which increased over 842% from 400 in 1979/80 to 3,369 in 1987, indicates the vast amount of information that can be handled electronically. This adds to the anxiety of correctly locating the appropriate information for a dissertation topic.

TABLE 1. Overall Growth in the Online Database Industry

Directory Issue	Number of Databases	Number of Database Producers	Number of Online Services	Number of Gateways
1979/80	400	221	59	
1980/81	600	340	93	
1981/82	965	512	170	
1982/83	1350	718	213	
1983/84	1878	927	272	
1984/85	2453	1189	362	
1986	2901	1379	454	35
1987	3369	1568	528	44

Note. From: Directory of Online Databases (p. v), 1987, New York: Cuadra/Elsevier.

Traditional methods of locating information, such as using the card catalog for books and indexes for periodical articles, are no longer sufficient to complete a thorough review. The world of information is literally becoming available through the use of a keyboard, a telephone line of communication to interact with remote databases, and a person experienced in computer searching techniques. Access to information stored on compact or laser discs will further alter the ways in which doctoral students use the library.

The information explosion is continuing. The 1986 Bowker Annual reports that 51,058 new or new edition hard or paperback titles were produced in the United States in 1984, with preliminary figures for 1985 totaling 40,929 (Table 1, p. 420). The 1983 titles labeled "Education" totaled 1,059. Bowker lists the 1984 average price of a hardcover book as $29.99, with a hardcover book in education averaging $24.47 (Table A, p. 424). Ulrich's International Periodicals

Directory for 1986-87 lists 68,000 periodicals in 534 subject areas, and this only covers periodicals currently being published. Ulrich's companion volume, Ulrich's International Periodicals Directory, Irregular Serials and Annuals lists an additional 35,000 titles. This volume focuses on annuals, conference proceedings, and publications issued irregularly or less frequently than twice a year. These numbers have been included to amplify the large amount of information currently produced.

Doctoral candidates must decide which sources are most likely to contain information on their topic and review those sources to decide if they are appropriate for inclusion in the literature review chapter. Doctoral candidates are no longer limited to local resources. Interlibrary loan services assure the availability of any resource in the world, when provided with the appropriate amount of lead time. Obviously, a tremendous amount of information is available. It is a huge task to identify materials prior to sorting through them without the use of computerized literature searching technology. What could take months with a traditional hand search, takes only a few seconds, given the appropriate search strategy, for a computer. Thus, this study is concerned with the important issue of how advisors working with doctoral candidates advise them to identify and locate the appropriate resources for a dissertation literature review.

Bibliographic Instruction, which formally instructs students in how to use the library, is a relatively new field. The Bibliographic

Instruction Section of the American Library Association, Association of College and Research Libraries, was established in 1974. In the library of the university where this study was being conducted, a course for graduate students in education focusing on the process of completing a literature review has been taught once a year since 1982. Library subject specialists lectured to all education research classes and to selected subject area classes upon request of the faculty member. No systematic way of ensuring that all education students know how to use the library currently exists at this institution. Neither are all doctoral students aware of the advantages of computer searching for their research areas. In the library where this study was conducted, candidates fill out a form describing their topic, and set up an appointment with a librarian for detailed assistance or computer searching. The doctoral candidate is the initiator.

Doctoral candidates take different courses and focus their doctoral studies on a variety of topics. The faculty advisor alone is the common factor. Most of my interactions were with doctoral candidates who are attempting to interpret what they think their advisor wants, or trying to anticipate what the advisor wants. This study focuses directly on the advisor's beliefs, instead of interpretation by their advisees.

Purpose of the Study

This study investigates how faculty advisors in a college of education at a research university prepare their doctoral candidates

for the dissertation literature review, the procedures they use, and the reasons behind those procedures.

Overview of Design

This study used a preliminary questionnaire followed by a taped interview. Thirty three faculty advisors at a College of Education in a medium sized research university in the Pacific Northwest were the subjects. Each of the faculty advisors involved in this study had chaired at least three dissertation committees within three calendar years of the study and/or taught one of the core research courses in the college. The methodology is discussed in detail in Chapter III.

Significance of the Study

This study will be of importance to faculty advisors, doctoral candidates, and university reference librarians. This study will describe in depth how a selected group of active faculty advisors prepare their doctoral candidates for the literature review portion of the dissertation. As the study focuses on a small group of faculty advisors at one university, the results are not be generalizable to other universities or the population as a whole. However, it will serve as an example of how the literature review is viewed from the perspective of the doctoral advisor, and will serve as a base for similar studies at other institutions, and in other disciplines. Until a pattern is identified, the results cannot be examined nor can suggestions for change be made.

CHAPTER II

LITERATURE REVIEW

One of the roles of the literature review in a dissertation is to assure familiarity with related studies prior to completion of a new study. The skills required to complete the literature review are as basic as the entry-level skills necessary to do research. For example, the skill to select an appropriate index or abstracting source to locate the research literature in a given discipline is similar to deciding which instrument would be most appropriate to measure a given research problem.

Osburn's Academic Research and Library Resources (1979) states that since World War II there has been an increased emphasis on methodology and research design and a de-emphasis on the product of research as a highly substantial contribution to knowledge on its own. The use of data has increased substantially in social science research, and the trend toward greater objectivity has coincided with a rapid trend away from reliance on subjective information in the form of historical narrative and value judgment. Related to this is a shift from description and prescription to prediction, along with the development of theoretical approaches to the solution of identifiable social problems (Osburn, 1979, p. xx). Osburn's work applies to the literature review section of the dissertation. If the literature

review is considered part of the methodology and research design, and if Osburn is correct, advisors will need to place an increased emphasis on completion of a high quality literature review chapter. However, if the literature review is considered to be a product of the research, possibly the advisor will spend less time with doctoral candidates on this portion of the dissertation.

In reviewing the literature on how faculty advisors prepare their doctoral students to write the literature review portion of the dissertation, very little information was located. Therefore, the following questions were generated to form the framework for a review of related literature: (a) How are students taught the skills necessary to complete a literature review? (b) How do the advisors assist or advise their doctoral candidates to complete the literature review of the dissertation? and, (c) What do the self-help books that doctoral candidates may purchase recommend?

This chapter is organized in the following broad areas: (a) Definition of the Literature Review; (b) History of the Dissertation; (c) The Faculty Advisor Role; (d) Bibliographic Instruction; and (e) Self-Help Books.

Definition of the Literature Review

For a doctoral candidate, the literature review focuses on the process of locating, reading, and synthesizing materials on a given topic in order to formulate a research question appropriate for dissertation research. This literature review process also implies

that the most important studies will be described in the review and that other less important materials may be left out. The literature to be reviewed for a given topic depends on the nature of the question. If doctoral candidates in experimental research limit a literature review to books, then they may miss the heart of current materials for their topic which are generally available only in journals. Historical research usually requires use of primary sources, the original manuscripts, local documents and the like related to the topic (Jones, Chapman & Woods, 1972); field research in anthropology requires familiarity with the region to be explored as well as the aspect of the culture to be observed, and the appropriate methods to record such observation. Current topics, such as selection of computer software for special education, may be forced to rely heavily on journal, magazine, and possibly newsletter articles only, while the field establishes itself. Light and Pillemer (1984) summarize the following learning points for justifying the purpose and continuation of literature reviews in science: (a) reviews have cemented substantive findings; (b) reviews help to interpret other findings; (c) reviews can resolve controversies; (d) reviews can teach broad lessons about accumulating evidence; and (e) reviews underscore the myth of the single decisive study. Therefore, the purpose of the review is to help the reader become familiar with the location of information in a field, the authors in that area of study, the issues and controversies within the area of study, and the area of concern that defines the dissertation topic. Doctoral candidates are

responsible for taking the readings one step further and for synthesizing and organizing the known information, and for focusing their research on one specific area which is yet unexplored in the literature.

Jackson (1980) reports that none of a sample of 39 books on general methodology in social science devote more than two pages to literature reviews. Jackson's investigation of the quality of social science reviews published in the period 1970-1976 turned up an almost complete lack of systematic procedures. He describes the need for integrative reviews in the behavioral sciences:

> Reviews of research are a fundamental activity in the behavioral sciences; they usually precede any major new research study and also are done as independent scholarly works. The focuses and purposes of such reviews vary substantially. Some investigators are primarily interested in sizing up new substantive and/or methodological developments in a given field. Some are primarily interested in verifying existing theories or developing new ones. Some are interested in synthesizing knowledge from different lines or fields of research, and still others are primarily interested in inferring generalizations about substantive issues from a set of studies directly bearing on these issues. (p. 438)
>
> It appears that relatively little thought has been given to the methods for doing integrative reviews. Such reviews are critical to science and social policy making and yet most are done far less rigorously than is currently possible. It seems likely that some of the confusion that surrounds many topics in the social sciences is partly a result of nonrigorous reviews of research on the topic . . . there is need for scientists who do integrative reviews or use them to consider the merits of the ideas, to think more about the problems to which they are directed, to try new approaches that appear promising, and to evaluate the effectiveness of those approaches. (p. 459)

Jackson's work is expanded by Cooper (1984), who defines the process of integrative research reviewing in the social sciences as

containing five stages or phases: (a) problem formulation; (b) data collection; (c) evaluation of data points; (d) analysis and interpretation; and (e) presentation of results (p. 12). Light and Pillemer (1984) develop four themes in their book on literature reviews in the sciences: (a) any reviewing strategy must come from the precise questions driving the review; (b) disagreements among findings are valuable and should be exploited; (c) both numerical and qualitative information play key roles in a good synthesis; and (d) statistical precision cannot substitute for conceptual clarity.

Long, Convey, and Chwalek's (1985) Completing Dissertations in the Behavioral Sciences and Education: A Systematic Guide for Graduate Students attempts to systematically reinforce the critical steps in the dissertation process that are often introduced unsystematically (p. x). Information on the literature review is covered in chapter three, "Making Effective Use of Special Library Resources", and in chapter five, "Writing the Proposal: Introduction and Literature Chapters", which has a subsection on the review of literature chapter. The authors suggest the following:

> In conducting your search of the literature, you should have determined the following things:
> . the relevance of existing theories to your problem;
> . previous empirical studies that are relevant to your problem;
> . other studies and issues that must be reviewed to provide a broad context for your study;
> . verified facts related to your problem, based on hypotheses that previous studies have confirmed or on assumptions made by previous studies that seem to be reasonable;
> . specific research needs that you or others have identified;
> . all important variables that need to be considered;
> . functional relationships that exist among the variables;
> . specific methodologies that others have employed;

. instruments that others have employed and their apparent appropriateness; and
. the populations studied by others and specific results for each population. (pp. 79-80)

They also warn:

> This chapter . . . is likely to be the most difficult to write. It may need to go through several drafts. If possible, have someone--preferably an expert in your field--review the chapter after you have completed what you consider your final draft. (p. 82)

The stages, themes, and suggestions summarized in the research literature reflect the difficulty and variety of skills necessary for doctoral candidates to complete an effective dissertation literature review.

History of the Dissertation

The first university doctorates were probably the Doctor of Civil Law and the Doctor of Canon Law awarded by Bologna in the twelfth century for the completion of its courses in the study of law (Schwertzer, 1965). Graduate education as we now know it first started in German universities of the nineteenth century. The first American Doctor of Philosophy degrees were awarded at the Yale University commencement in 1861. The history of Yale indicates "the degree of Doctor of Philosophy . . . [was] instituted and in accordance with the usage of German universities to be conferred on those students who have successfully pursued the . . . named higher course of . . . study" (Chittenden, 1928, V.1, p. 87). Three

graduates received the Ph.D. in the fields of philosophy and psychology, classical languages and literature, and physics. Titles of the dissertations, department of study, and names of the students were listed as: (no title provided), Philosophy, written by Eugene Schuyler, Ph.D., 1861; "Ars Longa, Brevis Vita," Classical Languages and Literature, written by James Morris Whiton, Ph.D., 1861; and "Having given the velocity and direction of motion of a meteor on entering the atmosphere of the earth, to determine its orbit about the sun, taking into account the attractions of both these bodies," Physics, written by Arthur Williams Wright, Ph.D., 1861. An unsuccessful attempt was made to get copies of the dissertations via interlibrary loan from the Yale University Library so that their literature reviews could be described in this dissertation. However, the original dissertations no longer exist at the Yale University Library, and no archival copies or film copies were made. It is unfortunate that the first dissertations awarded in the United States have not been preserved.

Since that time, national and state legislation and local university regulations have solidified requirements for doctoral level graduate programs in the United States. The traditional pattern for doctoral students calls for a pursuit of their studies for a predetermined minimum number of required credits, a comprehensive degree examination covering prescribed courses, and the presentation of a dissertation reflecting results of their original investigations (Mayhew, 1977). This pattern is followed at the university where this

study was completed. Graduate students are required to complete a set of credit course requirements, to successfully pass a set of comprehensive examinations, and to complete a dissertation.

A common format for dissertations, especially those requiring descriptive or experimental research, is the five chapter format: (a) Introduction, (b) Literature Review, (c) Methodology, (d) Report and Analysis of Findings, and (e) Conclusions, Implications and Recommendations. Although some dissertation formats, for example those emphasizing historical methodologies, may not contain a separate chapter for the literature review, it still is assumed that the doctoral candidate is familiar with the prior research of the specific topic and will weave important studies into the body of the dissertation. Recent trends in dissertation production have legitimized the replication and extension of former research or a prior dissertation in order to build and expand existing knowledge. Replication is a broader term than "repetition" or "duplication." It means repeating a research study but usually with variations (Kerlinger, 1979, p. 114). Almack's 1930 text on thesis writing reminds the student that only by reading what others have done can the student judge the originality of his or her own work (p. 224). He continues by reciting an experience of Dr. Thorndike, who had received a letter describing a piece of research which the writer wished to offer as a thesis. "I know the problem is original," the writer said, "because I have carefully refrained from reading anything on the subject" (Almack, 1930, p. 224).

The importance of the dissertation as an information source is emphasized by Boyer (1973) in his study The Doctoral Dissertation:

> With each degree conferred, another research project has been completed and the results reported in a dissertation. Each dissertation represents a refereed paper, supervised by an advisor whose competence in the field is acknowledged by the position he [sic] holds within the university and subject to the criticism and guidance of two to six other similarly distinguished individuals. The research completed under such stringent conditions surely is of no less value than that completed in laboratories and workshops outside the halls of academe. (p. 13)

Still to be studied is the role of the literature review in the dissertation process and the way in which the faculty member assists doctoral candidates in the completion of the literature review.

The Faculty Advisor Role

Bargar and Mayo-Chamberlain (1983) identify four critical moments or phases of graduate study when advisors can assist students in gaining the maximum benefit from the experience, while causing the least psychic distress: (a) entry into the department and building a program of study, (b) comprehensive examinations, (c) dissertation research and writing, and (d) separation and job placement. This section will focus on the writing of the literature review portion of the dissertation.

The faculty advisor plays a pivotal role in the development and completion of a dissertation. This study focuses on the role of the faculty advisor in the literature review portion of the dissertation. The education literature (e.g., ERIC, Dissertation Abstracts

International, etc.) lists no studies that focused on this topic. Martindale's (1980) Ideals and Realities of Ph.D. Advising concurs:

> When I review the sparse literature on graduate advisors, it is incomplete and operates with categories so broad and loose as to leave the matters they are intended to explain undeterminable. (p. 21)

Faculty members who join a graduate faculty are expected to take on advising responsibilities. Few universities provide a mechanism to assist such faculty members in allocating time for doctoral-level advising. Further, Teague and Grites (1980) note that the specification of duties required of faculty advisors were generally neglected in their study of collective bargaining agreements and institutional documents. This indicates that different amounts of advising time may be available to a doctoral candidate, dependent on other obligations of a faculty member, that may range from classroom instruction to research to professional association activities.

Martindale, in his book Ideals and Realities: Some Problem Areas of Professional Social Science (1980), describes the dissertation experience in the following manner:

> The doctoral dissertation, done under the guidance of the graduate student's doctoral advisor, is usually the most important piece of research he [sic] has ever carried out - often it will be the most significant piece of research he [sic] will complete in his [sic] entire life. The doctoral candidate-advisor relationship is fraught with the potential for: (1) apprenticeship to an inspired scholar and teacher, (2) insight into the hollowness and emptiness of an undeserved reputation, (3) potential for exploitation of advisor by advisee or advisee by his [sic] advisor, (4) explosive personal antagonisms, (5) punitive action by other professors who attack a student's advisor through his [sic] advisee. There are, of course, many

> other possible developments of the doctoral advising relationship. Even his [sic] choice of a dissertation topic by a graduate student may be affected by jealousies and rivalries among his [sic] professors. (pp. 14-15)

Therefore, a number of issues must be considered in describing how an advisor might approach the role of being chair of a dissertation committee. All of the issues individually, and collectively, influence the advice that the doctoral candidate receives. First, how familiar is the advisor with the area of study? If the advisor is not familiar, how is the dissonance handled? Second, how do advisors view their role in the dissertation process? An advisor who believes that the doctoral candidate should work independently, an advisor who believes internships are paramount, and an advisor who believes in apprenticeships/assistantships would all have different approaches in advising and assisting their doctoral candidates. This role belief may never be verbalized to the doctoral candidate. Third, is the limited amount of time for completion of doctoral course work and other requirements, the "calendar factor" that places an additional stress on the doctoral candidate. Again, a variety of appropriate approaches exists which vary from scheduled meetings to a minimum number of pages per week to only agreeing to look at final chapters in typewritten form. Sorenson and Kagan (1967) suggest a system of selection and guidance that takes into account the abilities, personality traits, and expectations of faculty members and students and matches each student to a sponsor based on compatibility. If this preselection guidance does not occur, preferences of the

advisor may not be verbalized until they are violated, and this situation may not occur until the defense. The following are descriptions of actual cases:

> Another case had a very difficult ending. One of his peers refused to attend the terminar [sic] in New York City because he felt that the student should have taken several more years to do a more empirical kind of study. (That the peer was projecting his own values and skills was without question the basis for the difficulty and the misunderstanding.) Such instances as this led us to the forms which must be signed prior to scheduling a terminar [sic]. Also, this was an instance of peers serving on one another's committee, a practice we now discourage. I'm not sure, however, that one can ever completely prevent a last minute dissent on the part of one member of a committee. . .especially if that member hasn't participated as much as he/she should have along the course of the person's work.
>
> Another grim experience pivoted around a man's having his committee wiped out from under him because of professional conflict between him and his adjunct professor. It seems that they were "political" rivals in their particular professional field. (Fairfield, 1977, p. 199)

How does a doctoral candidate learn of those beliefs which are held by the faculty advisor? Do the beliefs vary with different portions of the dissertation? Sternberg (1981) listed the following types as the "least wanted" of dissertation problem professors: "Young Turk", "Career ABD", "Sadistic", "Sexist", "Hamlet-Complex", "Passive-Aggressive", "Jealous or Envious", and "Candidates' Problems and the Psychoanalytic Subculture" (pp. 148-152). Naturally, the nature of the interaction between the faculty advisor and doctoral candidate has an effect on the completion of the degree. Berelson's (1960) highly cited study on graduate education found that thirty percent of new Ph.D.'s felt that doctoral candidates got too little

supervision from their major professor while writing their dissertations, thus prolonging the period unnecessarily. Baird's study (1966) on role stress in graduate students found that "stress is more associated with the emphasis on completion than the sheer difficulty of departmental demands" (p. 144). Boyle's study (1986) on the psychology of doctoral degree candidacy described a session from a support group for doctoral candidates in which they tried to understand what it might be like to be an advisor:

> They imagined the various academic pressures and responsibilities and asked themselves just what it is that they would be trying to accomplish if they were in that role.
>
> What emerged was the sense that the advisor's role, under ideal circumstances, is not unlike that of a parent dealing with an adolescent. The advisor is alternately nurturing and supportive, on the one hand, and challenging, limiting and benignly neglectful, on the other hand. All of these attitudes are used to further the eventual goal of emancipating a self confident and competent adult. The group constructed this summary statement of an advisor articulating the role:
>
> > To the extent you listen to and incorporate my ideas, you allow me to experience myself as valuable in that I'm making a contribution to your thinking and your work; and, to the extent you thoughtfully insist upon and responsibly defend your own ideas in the face of the best criticism I can come up with, you earn my respect and, ultimately, the status of colleague. (p. 70)

These studies discuss the advisor's role with the dissertation as a whole, not discussing individual chapters, or individual skills, such as analysis of data versus developing the research question. Larger skills such as writing ability or the ability to synthesize are not mentioned. Naturally, the dissertation can be seen as overwhelming by doctoral candidates if it is not broken down into

individual workable parts.

To summarize, the role of the faculty advisor in the doctoral dissertation is to assist doctoral candidates in completing the appropriate requirements at a given university. The role of the faculty advisor in individual portions of the dissertation, specifically the literature review, have not been identified in the published education literature.

Bibliographic Instruction

Instruction in how to use library resources has been occurring informally on a individualized basis since librarians were put in positions in which they interacted with the public (Katz, 1983). In university settings, reference librarians interact with students and faculty to assist them in locating the information they require. In a sense, reference librarians can be seen as tutors with a series of individual students. Some sessions may last less than a minute, others may last much longer. The phrase bibliographic instruction is used to describe the intensive process of teaching the efficient and effective use of the library by demonstrating library research methodology, search strategy, and the bibliographic structure of a given literature in a discipline (Roberts, 1982, p. 15). Research in the past twenty years has focused on library research skills for the variety of libraries and library users (for example: Adams & Morris, 1985; Beaubien, Hogan, & George, 1982; Mellon, 1987; Oberman & Stauch, 1982). Changes in curriculum that emphasize the importance of

integrating bibliographic instruction into the existing college and university course requirements have been made at such schools as Montieth College, Earlham College, University of California at Los Angeles and University of Wisconsin at Parkside.

The 1970s have seen an increase and specialization of instruction at the university level. Library conferences and conventions started to routinely include sections or sessions that were devoted to instruction. The Bibliographic Instruction Section of the Association of College and Research Libraries was formed in 1977 after functioning as a Task Force since 1971. The Library Orientation Instruction Exchange (Project LOEX) located at Eastern Michigan University has held an annual conference since 1971. These conferences have aided the people who deliver the bibliographic instruction to the users. The actual instruction has usually occurred within the reference department, as public service librarians deal with teaching users how to locate information. This increase in focus on appropriate search strategies to locate information was coupled with a parallel growth in the amount of information generated and available. Bestsellers, such as Naisbett's Megatrends (1980), have explained and have documented the continued change from a agriculture-based society to an information-based society. The natural implication of Naisbett's thesis is that people know how to locate the information in order to use it.

This study dealt with the process that advisors use to assist their doctoral candidates in completing the literature review. The

unique needs of graduate students are traditionally narrowly subject-oriented. Bibliographic instruction is usually geared to the larger subject area, and in this case it is be "education." Bibliographic instruction for graduate students in education is different from bibliographic instruction for chemistry graduate students. At the institution where this study was completed, the education doctoral students may receive a one-hour lecture on the bibliographic search strategy process in their research sequence, possibly as part of an overview course in research methodology. This minimal amount of time devoted to specific instruction is not unique to this campus. It is difficult to integrate appropriate library skills into all courses that may require them on a university campus. With these examples, it is obvious that library outreach activities are focused on the student, not the faculty member who may be serving in an advisory capacity. The only ways faculty may become aware of new sources or techniques in locating information are through self-initiation, sitting through a librarian's lecture they have scheduled for their class, or by a librarian offering to assist them with a personal research problem.

The university where this study was completed has suffered a lack of funds for a number of years. The areas of automation and computer usage within the library are not all available to the users. Therefore, users may not be aware of the vast changes in the ways to access and locate information that are available to them. This lack of funding coupled with the lack of outreach to the advisor to inform

them of change may account for the comfort with traditional techniques that have worked for years, or the misuse of a few key terms to give the illusion of current knowledge.

John Rice, in his 1978 dissertation on the needs of education graduate students, found that a valid and reliable test of bibliographic skills for graduate students in education was needed. His study focused on constructing an inventory of specifications and on developing an instrument to be used to assess the competency of doctoral students in education to do library research. His "Final Table of Specifications" includes the following types of library materials with which he feels doctoral students should be familiar:

> Education indexes: Research Reports, Journals, & Pamphlets; Dissertations; General Indexes; Card Catalog; Automation of Library Resources; Encyclopedias & Dictionaries: Education, General; Government Documents; Newspapers; Biography & Directory Indexes; Handbooks, Manuals and Yearbooks; [and], General Library Organization and Use. (p. 120)

The sources identified by Rice should also be emphasized as important by the advisors while working with doctoral candidates in completion of the literature review portion of the dissertation.

Questions not answered after reviewing the literature review on bibliographic instruction and faculty advisors include the following: (a) Do faculty advisors consider it necessary to have appropriate library skills? (b) Are university librarians dealing with a mind set that says, "once you learn a skill you are done, it does not have to be changed or updated," that is, are high school library skills sufficient? and (c) Do faculty advisors keep up with changes in search

strategies, and, if so, how?

Self-Help Books

If doctoral candidates are left alone to complete the dissertation, and if they feel uncomfortable about the literature review, they may consult a local library or bookstore for a self-help book. Many titles are passed around among doctoral candidates by word of mouth or worn copy and are currently on sale in local bookstores. They tend to have quick-fix titles that take advantage of the very vulnerable state of the typical doctoral candidate who may have no other avenue for practical advice. The theory of bibliotherapy, as originally defined by Alice Bryan (1939), fits the needs of the doctoral candidate. Her article describes the following six objectives of bibliotherapy: (a) to show readers they are not the first to have the problem; (b) to permit the readers to see that more than one solution to the problem is possible; (c) to help the readers to see the basic motivations of people (including themselves) involved in a particular situation; (d) to help the reader see the values involved in experience in human terms; (e) to provide facts needed for the solution of their problems; and (f) to encourage the readers to face their situations realistically (pp. 773-776).

The doctoral candidate who uses bibliotherapeutic techniques may begin an elusive search for the right book to help with the literature review portion of the dissertation and may be seduced by a flashy title. Three titles currently on bookstore shelves were selected to

examine how preparation and completion of the literature review portion of the dissertation was described. In Balian's How to Design, Analyze, and Write Doctoral Research: The Practical Guidebook (1982), there appears a sixteen page chapter on literature reviews. The majority of space is spent explaining how to use the ERIC indexing system through a "12 step" process. The book includes a section that purports to answer what it claims to be the most common question relative to the literature review: How many references are enough?

> After examining various articles, texts, and dissertations from the search efforts, a researcher will vividly (painfully?) be aware of the volume of documents available. If the total number of documents is low relative to normal expectations (usually less than about thirty articles), then consider methods to increase the listing. A good technique here is to include more historical articles which will then act as a preface to the more specific literature review. Further, perhaps the advisor or committee members have favorite authors which can be included in a more general way, even if the articles don't exactly fit into the research topic.
>
> If burdened with too many references (50 or more), finely focus and reduce the literature review. Include only landmark studies and dispense with the rest. Use only articles which have a direct and specific bearing on the research topic. Reduce historical or theoretical articles to a minimum level (approximately five to ten references). (pp. 25-26)

The problem with this narrow advice is that it does not take into account the variations in subjects that doctoral candidates may pursue and it gives the same advice to all. Terms that may be simplistic to the experienced researcher, such as "landmark study," may be unclear to the doctoral candidate. How does a student know if a study is a landmark study? Even worse is the suggestion to plug in favorite authors of committee members, regardless of the topic of the

dissertation. What kind of advance of knowledge will that type of citing produce? Balian does get close to answering how many references are enough by stating that "50 or more" are too many. Again, this does not take into account the needs of a specific area of research, since some topics may require a more detailed literature review with a larger number of citations.

Richard W. Moore's Winning the Ph.D. Game: How to get into and out of Graduate School with a Ph.D. and a Job (1985) does not mention specifically the literature review of the dissertation. The words "library" "literature" or "review" do not appear in the index to his 308-page book. In the chapter on making it through graduate school, while discussing survival skills, the topic of "assigned reading" is the closest to possibly giving guidance for the beginnings of a literature review. The following is Moore's advice on what to do when confronted by a series of reading lists:

> Generally, if you are confronted by a lengthy bibliography of books and articles on a single topic, you will want to start with the most recent items and work backwards. This procedure has two advantages: first, current works will review the relevant books and articles from the past--"the literature of the fields," in academic jargon; second, contemporary works will be exploring the issues most likely to be on the mind of the professor. By going backwards chronologically, you may find after a few books and articles that you are able to identify the most influential researchers in the field, their major works, the largest flaws in their works, and how they relate to current issues in the field without reading them. At this point, you have the basic knowledge you need to survive the course.
>
> Academic works are also structured to help ease your burden. Almost all scholarly articles begin with an abstract. Read the abstract and determine if there is anything else you need to know about the work. If so, use the article itself as a big appendix to the abstract where you look up the answer to the specific questions. Using this method, you should be able to tear through

> five standard journal articles in the time it takes to completely wade through the turgid prose of one. Books can often be handled in a similar manner. They may begin with a summary or finish with a chapter of conclusions. Read the summarizing chapter first, wherever it is. Use the rest of the book as a reference. You may find after reading the summary chapter in a technical book that careful examination of a few tables will give you all the information you need. (p. 104)

Whether a doctoral candidate has to read differently when preparing for a course versus preparing for a dissertation is not discussed. Moore also does not encourage the doctoral candidate to think about the literature, much less to identify areas that may need further exploration. Most offensive is the assumption that all professors will only be interested in the most recent developments in a field.

Cortada and Winkler's The Way to Win in Graduate School (1979) suggests that the best guide to writing a dissertation is to obtain a recently completed one to use as a model. Next, they suggest the doctoral candidate read recent issues of Dissertation Abstracts. Then, their advice becomes more abstract:

> Check the leading journals of your subject area, since they usually list dissertations in progress. General bibliographies in your field will also be useful in settling on a topic. And if you feel that some professor is working on your idea for a book, write him [sic] and ask about his [sic] research. (pp. 85-86)

The problem with this advice is two-fold. First, it assumes prior knowledge on the part of the doctoral candidate, i.e., which are the leading journals in a subject area? Second, it is too global: why recommend reading general bibliographies when doctoral candidates

could be referred to the Bibliographic Index: A Cumulative Bibliography of Bibliographies (1938-to date) to see if a bibliography specific to their topic has been completed?

Summary

In conclusion, the literature review is a portion of the dissertation for which little quality material has been written to guide the doctoral candidate in education. Popular guides outside of the field of library science leave much to be desired, and contain incomplete and misleading information. The role of the faculty advisor in assisting the education doctoral candidate during completion of the literature review is not addressed.

CHAPTER III

METHODOLOGY

This study investigated how faculty advisors in a college of education prepare their doctoral candidates for the literature review portion of the dissertation. This chapter will describe the design and procedures of the study. It is arranged in five sections: (a) selecting the faculty; (b) contacting the faculty; (c) questionnaire development and execution; (d) interview; and (e) analysis of data.

Selection of Faculty

Thirty three faculty members in a highly ranked College of Education (for example: Cartter, 1977; Eash, 1983; Kroc, 1984; Ladd & Lipset, 1979) at a research university in the Pacific Northwest participated in this study. Those faculty who had served as dissertation committee chairs for three or more doctoral candidates during the twelve term period of 1980-1982 and/or taught the basic research courses were interviewed. The final group consisted of 28 male and 5 female faculty members. The group had a combined experience of 574 years since their doctoral degrees had been awarded, with a mean of seventeen years of experience.

Contacting the Faculty

Faculty members were initially contacted by phone. They were told the purpose of the study and how they were selected as potential participants. All faculty contacted agreed to participate. An interview date and time was scheduled. Faculty were told they would receive a preliminary questionnaire that needed to be filled out and returned prior to the interview. A handwritten note thanking the faculty member for agreeing to participate, a reminder of the interview date and time, and the preliminary questionnaire with an addressed return envelope were hand delivered to each participant within twenty four hours of the initial phone contact.

Preliminary Questionnaire

The preliminary questionnaire (Appendix A) had four points of focus. First, personal background information that was not readily available in university publications, such as the date the faculty member joined the College of Education under study was queried. Second, an open ended question asked faculty to identify the research tools considered important for "any College of Education dissertation." Third, faculty were asked to rate fifteen common formats of information (i.e., books versus government documents) on a scale of 1-5 as to productivity for dissertation research. Finally, faculty were asked to rank five parts of a dissertation; first as to the time and energy they needed to spend with their advisees to develop that part; and second, for the same five parts, they were

asked to rank their expertise. Data were tabulated as the questionnaires were returned.

Interview

Reminders for each interview were hand delivered twenty four hours before the scheduled time. A taped interview, which employed a semi-structured interview sequence, lasted between three-quarters to over one hour in duration. The interview schedule was based on a combination of Spradley's Ethnographic Interview (1979) and Benjamin's Helping Interview (1981). Spradley's work focuses on interview techniques helpful in "understanding another way of life from the native point of view" (p. 3). Benjamin (1981) asserts there are two types of interviews, the one in which the interviewer seeks help from the interviewee and the one in which the interviewer tries to help the interviewee. Benjamin focuses on the second type of interview. "This demands giving on the part of the interviewer. He must give of his time, his capacity to listen and understand, his skill, his knowledge, his interest--part of himself" (p. xxii). He divides the interview into three stages, the initiation, or statement of the matter, second, the development or exploration, and third, closing.

In this study, higher education served as the culture, and the dissertation was a rite of passage. According to Winston and Polkosnik (1984) "The oral defense of the dissertation . . . has the unique quality of being a final rite of passage that signifies the student's entry into full membership of the community of scholars or

the profession" (p. 305). Boyle (1986) studied doctoral degree candidacy in depth and describes it as an existential rite of passage:

> Three features of the rite of passage model are especially salient for our understanding of doctoral degree candidacy as an existential rite of passage: the characteristics associated with rites involving the acquisition of leadership within a group; the existence and significance of autonomous transitional periods; and the social and existential implications of the dichotomy between the sacred and the profane. (p. 24)
>
> Summarizing these three aspects of the rite of passage, the implications for the psychology of doctoral degree candidacy begin to fall into place. The PhD [sic] represents a position of leadership within the academic community. The rites of passage which culminate in conferring that status involve a substantial period of transition, a stage long enough and distinct enough to acquire autonomy. During this period of transition the candidate is thrown into a liminal state between the (perceived-to-be) profane condition of graduate student and the (perceived-to-be) sacred condition of the PhD [sic]. (p. 26)

Therefore, the interviews in this study focused on understanding the role of the dissertation and on the parts of the dissertation, specifically the literature review in the culture. The appropriate individuals to question regarding the rite of passage were the elders in the society, in this case the faculty members who advise dissertations. Questions focused on the dissertation advising experience, and focused on aspects such as which portions would a doctoral candidate expect to receive assistance and which portions would they be left on their own. The intertwining of the two complementary interview styles of Spradley and Benjamin served as the basis for the interview schedule.

The interview began by presenting the questionnaire data collected and analyzed to that point and by asking the faculty member

to explain and interpret the outcomes. In addition, the faculty members were asked to discuss how their responses were similar to or in opposition to the collected data patterns.

Second, faculty were asked a series of open ended questions to describe how they advised their doctoral candidates who were preparing the literature review portion of the dissertation. Faculty members were presented with a typed list of doctoral candidates and dissertation titles they had chaired. The time period involved was the twelve term period between January, 1980 and December, 1982. The faculty member was asked to specifically comment on the literature review in each dissertation in terms of how they advised, on the characteristics of a "good" versus a "poor" literature review, and whether they advised Ph.D. and D.Ed. students differently.

Third, faculty members were given either an abstract of their own dissertation from Dissertation Abstracts International or a citation to their dissertation from American Doctoral Dissertations. They were asked to comment on their own literature review, how they had been advised, etc. In most interviews, this tended to spark a general discussion of the literature review, during which the faculty member provided additional background information, details on the procedures used, and opinions on other related (and unrelated) matters.

Analysis of Data

The data were analyzed in two parts. The questionnaire data were tabulated and organized for display (Tables 2-4). The interview data

were interpreted using content analysis techniques based on the information extracted from the taped interviews.

The content analysis included the following procedural steps. First, I listed to all the tapes in their entirety (about fifty hours). Second, I transcribed all the tapes myself. This caused a second in-depth focus on the comments. Third, I cut up the copy of each transcript at every point at which a new topic was introduced and pasted that portion on a separate card. I coded the cards to indicate advisor and wrote down the numbers that indicated the space on the tape where the comment occurred. The cards were color coded for ease in location. Fourth, I classified all the cards into major groupings of response. This was done to get past the temptation to report answers to the questions in the same sequence in which they were asked. By dissecting the interview data, the many parts could be analyzed in depth. Fifth, I examined the sets of cards in the major groupings as I worked on each section of the findings and listened periodically to the actual tapes to gather the emotional content of the responses. Sixth, I selected the comments that best characterized the response pattern of the study group and included them in the findings.

Limitations of the Study

The data reported in this study are based on the findings of one group of faculty at a College of Education in a Pacific Northwest research institution. Participants were selected based on current

activity in chairing dissertations. Because the study is based on one institution and the participants were not selected randomly, the results are not transferable to other populations.

CHAPTER IV

FINDINGS

This study focuses on how thirty-three college of education faculty advisors at a research oriented university prepared their doctoral candidates for the literature review portion of the dissertation. Data were collected through a questionnaire and extended interviews. The preliminary questionnaire (Appendix A) was sent to the advisors prior to the interview. It asked a series of questions that requested information such as: (a) their current number of doctoral advisees; (b) dissertation productivity ratings for publication formats in which educational opinion and research are disseminated; (c) the amount of time/energy they spent advising each of the chapters of a dissertation; and (d) their level of expertise in advising each of the chapters of the dissertation. Loosely structured interviews collected the majority of data. The interviews began with a request for the faculty member to compare his/her questionnaire with the collective responses of the group.

This chapter will report the findings of the study. Perhaps the most important finding, the one that underscores all the others, is that although doctoral faculty advisors considered the literature review to be an important and necessary part of the dissertation, they tended to expend more of their expertise and advising time/energy on

other chapters or aspects of the dissertation. They justified their behaviors with examples of personal experiences with doctoral candidates. Direct quotes from the interviews will illustrate the ways in which the faculty advisors prepared their doctoral candidates for the literature review portion of the dissertation.

This chapter begins by describing the characteristics of the study group. It continues by reporting advisor comments organized in a fashion similar to the progression of the dissertation experience, with a focus on the literature review: (a) the selection of a dissertation topic; (b) the beginning stages of the literature review, including recommended sources, format preferences, doctoral student myths regarding the literature review, and the advisor's own definitions of a "good literature review"; (c) the advisor's role in the actual writing of the literature review section of the dissertation; (d) the advisor's self ranked expertise/experience regarding the literature review; and (e) the advisor's own advising behavior in different situations (e.g., as a committee member and/or chair of a doctoral dissertation committee, and their use of personal recollections regarding their own dissertation experience).

Characteristics of the Study Group

Thirty three faculty members (28 men, 5 women) at a College of Education of a research oriented university in the Pacific Northwest participated in this study. Participants chaired a minimum of three dissertations in the twelve term period between 1980 and 1982 and/or

taught a course in the basic research sequence. Information on participants was collected from the study questionnaire and from biographical information published in the university catalog.

The University where the study was completed expects its faculty to do research and publish the results in appropriate journals and/or in book form in addition to normal teaching and advising assignments. The College of Education selected for this study ranks among the top fifteen education colleges in the United States. Areas of specialization represented included: Administration and Supervision; Special Education; Teacher Education; Foundations (history, sociology, anthropology, and philosophy of education); Educational Psychology; Speech/Audiology; Counseling; and Testing and Measurement.

Appendix B provides a tabular representation of the demographic data gathered on the study group. The paragraphs below describe and analyze that data.

All but two of the faculty in the study group received their doctorates from large research universities in the west and mid-west, the remaining two received their degrees from eastern universities. One-third of the group received their doctorate at the University that served as the site for this study. Thus, many faculty members are now colleagues of persons who chaired or served as a member of their own dissertation committee.

Over half of the study group, sixteen advisors, received their degrees prior to 1965. A third of the study group received their

doctorate during the period of 1965-1975. The remaining five members received their degrees between 1975-1979. This means that the majority of the study group completed their doctoral programs before university libraries offered computerized literature searching for doctoral candidates and other researchers. Many of the sources taken for granted in the field of education in the 1980's did not exist prior to the mid-sixties. For example, the ERIC (Educational Resources Information Center) indexing system was just beginning in the 1960's (Trester, 1981).

Graduate schools offer a variation of doctoral degrees. The College of Education at the site of this study offers two degrees, the Ph.D. (Doctor of Philosophy) and the D.Ed. (Doctor of Education). Twenty-six members of the study group received a Doctor of Philosophy degree, and seven a Doctor of Education (Ed.D. or D.Ed.).

Sixteen members of the study group joined the University faculty during the 1970's, fifteen during the 1960's and the remaining two during the 1950's. Academic rank level parallels the date of joining the faculty. Eighteen members of the study group are full professors, eleven are associate professors, and four are assistant professors. Thus, the study group contains a mixture of senior and junior faculty, representing a range of dates in joining the university faculty, and a variety of positions within the professorial ranks.

The average faculty member in the study group advised five doctoral candidates who completed their dissertations during the study period, with a range of zero to nine. The zero represented a senior

faculty member who taught one of the basic research courses, had advised many doctoral candidates, did not chair a dissertation during the designated time period, but was a member of several dissertation committees. The average respondent had nineteen doctoral candidates complete the program, with a range of one to sixty-two. It can be assumed that an advisor's doctoral candidates at a given time are at different places in their respective individual dissertations. For example, an advisor may be simultaneously working with a doctoral candidate in developing a proposal, another in outlining the literature review, another in developing the research design, another in analyzing the collected data, and yet another in final editing of the dissertation manuscript. In addition to serving as chair of a dissertation committee, faculty members serve as dissertation committee members. The average respondent reported participation in twenty-four doctoral dissertation committees, with a range of fifteen to seventy-eight.

Summary

The study group had degrees primarily from mid-west and western research universities. Their doctoral degree completion dates were equally divided between the 1960's and 1970's, similar to the time periods that they joined the faculty at the study site. The typical advisor had a Doctor of Philosophy degree, was currently advising five doctoral candidates, had assisted nineteen doctoral candidates in completion of degree requirements, and had been a member of

twenty-four dissertation committees. The study group was a mix of junior and senior members of the College of Education faculty.

Subject Areas in Which Advisors Consent to Chair

The first decision an advisor makes is in regard to dissertation subject areas. This conscious decision, usually made early in the faculty advisor's career, is whether to narrow or broaden his/her advising subject areas. Some only agree to advise doctoral dissertations with subjects within the very narrow band of focus that defines their personal research interests, while others accept a broader range of dissertation topics. The faculty members who decide to advise only those dissertations that closely relate to their own area of scholarship would normally be expected to have a better grasp of the literature discussed in their advisees' dissertations. Half of the advisors interviewed commented on the decision making processes they used to determine whether they would chair a dissertation committee.

The comments below come from advisors who prefer a broad range of subjects:

> It's a reason why I think I try to spend a lot of time trying to identify a problem . . . what happens in the process is people then start to read around in the literature of the field. Hopefully they'll write a couple of term papers in the field and begin to analyze the studies. Because if they're doing a study in an area of real interest to them--that's probably what they're going to teach courses in . . . they'll apply for jobs in that field . . . they're going to write in it. What you're preparing them for is "there's life after graduate school." And that's about what we're dealing with here.

I would rather have them work on things they were interested in. If I look back at all the ones that I advised, I could have probably developed a tremendous amount of expertise in one field by forcing everybody to write in my area of interest--but I wouldn't have learned as much. I think that I'm a broader person for having encouraged people to write in different areas. When I take a look at those 40 literature reviews that I've worked with, times probably about 20-25 pages or so on the average, I'm talking about 800 pages of literature review. And that can't have done anything but broadened me. So I think that a faculty member who sees the literature review as just a thing to get rid of is not using his smarts. It would be stupid of me to work on a literature search in a field that I know nothing about and wasn't interested in much. I would probably be better off to have the student switch to somebody else. The other thing that you can do is you can have other people on your committee, or other faculty members who really know the field well. A lot of times you can ask them to take a look at your chapter, and they'll tell you whether the thing is even. I can think of a few where I sent the literature review to somebody on the committee and I said, "Is this a fair analysis of the situation?"

The comments below are from advisors who limit the subject areas they advise:

Usually if the student is working with me and writes a dissertation under my guidance, they select a topic that follows the major focus of their work, which I had something to with. So with this influencing, there is a close connection between what they do their dissertation on and the general area with which I have some familiarity.

I think there's some knowledge on the part of students that if they're gonna do a dissertation on the teaching of reading that they better not mess around with me because I don't know anything about it.

This advisor mentioned an additional element for agreeing to chair a committee:

Yes, I'll take a student in any area, except if it's an area where I don't have any respect--such as behaviorism. Then I say,

> "find somebody that likes that trash." But that's very seldom. Actually, nobody comes to me to be an advisor after they're admitted. I have to know them 5, 6, or 7 years. Because I'm not easy to get along with. I horse around, I have fun, I make jokes and some people think that's all I am because that's all they've seen of me. Then they find out in "Situation A" I'm this way, in "Situation B" I'm something else. So the person has to know me--and I have to see the person function. A dissertation, more than anything else in the doctoral program, is a trying experience at best. I don't want them to have to work out a relationship with me--you know loving and hating and all that kind of crap--all of which I understand goes on. I don't want to be part of that. I want to be able to say, "What the shit are you doing sister? God damn it, get off your ass and get going," and not to have her go around sucking her thumb and saying, "You've burned your brains out--you're wrong," and then we have to thrash it out. I don't want to be worried about their feelings, and I don't want them to worry about my feelings. If I wanna be upset, I'll be upset. Somebody said, "I don't want you to be upset" and I said, "I like being upset--don't tell me not to be upset." And I'm screaming! But that's typical, and unless you know that that's an acceptable way of approaching it we'll have trouble that I'd rather avoid.

The comments made by the advisors indicate that each decision to agree to chair a dissertation committee is separate, combining both the subject area and the doctoral candidate involved. This decision regarding knowledge of dissertation subject areas suggests that the literature review in each case could take on a different role. In the first case, where the advisor is willing to chair dissertations from a broad range of subject areas, the literature review must both introduce and educate the advisor at a level different from the casual reader. It may be necessary for the advisee to provide the advisor with copies of some of the material cited in the literature review. This may involve a slightly uncomfortable situation within the advisor/advisee relationship since roles are temporarily shifted, with the advisee becoming the subject specialist. The acceptance doctoral

students from a broader range of subject areas allows the advisor the opportunity to expand into many subject areas, but also leaves both the advisor and the advisee vulnerable to blind spots or internal controversies within a subject field that require an ongoing relationship with the individual professional literature, authors, professional organizational preferences, etc. to detect or understand.

In the second case, in which the advisor prefers to advise within a smaller subject grouping, the literature review may need to reflect the particular philosophical viewpoint of the advisor. The advisor/advisee relationship may, therefore, be more traditional, with the advisor serving as the subject specialist. The disadvantage may be that some legitimate alternative approaches to studying the subject are dismissed by the advisor prior to the advisees' personal exploration and possible rejection. The comments regarding personality compatibility indicate the personal intensity of the dissertation experience for both the advisor and the advisee.

Selecting a Dissertation Topic

The selection of a subject appropriate for a dissertation is the first stage of the entire dissertation process. It usually forces the candidate to examine the literature that defines the general problem being considered. Only a few advisors volunteered comments on the role of a study of the literature prior to the identification of the research problem. They suggested that some candidates need more guidance in this aspect than others. The following statements

illustrate the approaches of two different types of advisors. The first is from a faculty advisor in educational foundations who insisted that the candidate clarify the research problem prior to the literature search:

> People come in and talk to me about a dissertation here and a dissertation there, and they always have a figure of speech: "I wanna look at this." And I'll say, "Well, isn't that marvelous--why don't you look at the Baskin-Robins menu for the flavors for ice cream?" or "Why don't you go look at trees?" And I get, "What do you mean?" So, I say, "Why do you wanna have a look at that?" "Oh, well." They don't really know why they want to have a look at that, but they're gonna go look at that, and somehow maybe they will get it past an advisor who doesn't call them on it. You just don't go out and "have a look" at something. You should say why you are going to look at it, and what explicitly you are going to look at. Do you know? What are your questions? What are your leading questions and why are those questions important? If they can't work that thing out.
>
> They say, "Well, I'm gonna have a look at middle school curriculum." So they come running to the library, I guess, and say, "Show me where I can find all the stuff on middle school curriculum" So what do they do? You get a whole host of information right here, but here's what the university has . . . So they sit down and they start looking through this stuff. So, now they've done all that, and they still don't know their question. And then they say, "Now what am I gonna do? Well, maybe I'll take a look at . . ."

A second comment from an advisor in teacher education suggests that the literature search itself can clarify the research problem:

> When people come to me and say, "I'm ready now," implying they are ready to start on their dissertation, we sit down and we talk about problems--but I try to talk about problem areas. I try not to be too rigid in how we define a problem area. And, I try not to put them through an exercise of writing research problems at that point. As long as they have an idea of what they're looking for, and what not, then almost always my suggestion is to do some reading first. Not necessarily structured reading at that point, just some reading, so that they begin to get a feel of what it is that they're about. Then, we refine the problem. Once the problem is more refined, it still

> may not be in a finished form, then I encourage them to start reading more seriously and to begin looking at specific areas. Because, initially almost everybody has a much broader problem than they can deal with. They need to read in order to understand how much has been done, and where it's been done, and what other people have looked at.

I did not specifically ask, and no advisor volunteered comments, on the role of the informal literature searches made by a candidate during the forty plus courses that constitute a graduate program. The first advisor quoted seems to imply that these courses and their required term papers and reading should have focused the candidates' interest towards the eventual research problem. The second advisor quoted seems to imply that when candidates have completed most of their course work they ought to re-examine what they learned. The reflections that emerge out of this, combined with additional reading should bring the research problem into focus. No advisor described a specific personal advising strategy used early in the doctoral program that encouraged the candidates to use courses and term papers as a springboard for identifying and studying the literature in the general area that might become the dissertation problem. They may do it, but no one mentioned it.

Beginning a Literature Review

Questions II and III of the preliminary questionnaire (Appendix A) were developed to ascertain preferences for particular sources. Question II was open-ended. It asked the doctoral advisers to "list basic search tools that you consider to be most important--that you

feel must be used in any College of Education dissertation." The responses came in two forms, specific titles and general types of materials/sources. The titles listed most (four times for each) were Dissertation Abstracts and ERIC (Educational Research Information Center sources including Current Index to Journals in Education and Research in Education or Resources in Education). Education Index was listed twice. The following titles were listed once: Annual Review of Psychology; Encyclopedia of Educational Research; Handbook of Research on Teaching; Mental Measurements Yearbook; the National Society for the Study of Education Yearbook in the area; Psychological Abstracts; Reader's Guide to Periodical Literature; and the Review of Research in Education.

The second type of response to the open ended question did not include specific titles, but substituted descriptions of the type of sources that the advisor would consider basic for a dissertation. Such responses included "computer searches," which was listed four times. Three responses emphasized more traditional means of searching the literature with the following phrases: "hand search of journals closest to the topic," "manual searching of appropriate indexes," and "books and magazines through normal methods." Listed once were phrases such as: "overview sources" or "initial examination of reviews and synthesis of research." One faculty member was concerned that the dissertation topic should be "made to fit into a broader context via a wide range of possibilities in social, educational, psychological and general literature." Generic terms were used for

subject encyclopedias, indexes and table of content pages in journals. One faculty member listed "the person who runs the search" as a source.

Individual faculty members discussed the response pattern to this question during the interviews. Their statements echoed this initial vagueness in direction for doctoral candidates:

> In general I spend very little time advising students which library sources to use. I assume that by now they know how to use the library.
>
> The library is a smorgasbord and they're supposed to go over and sample and taste. Since I work with such a vast array of dissertations, I just point them in the general direction of the place and say, "Go over there." I don't consider that I have a sense of expertise about what they should know and where it should be.

It was during this initial stage of the interview that faculty members responded somewhat emotionally to their library knowledge or use of the library. Their comments ranged from apologetic to defensive to confrontative. This may have been because of their own personal history of working with personnel and policies in libraries. All knew sources, but may not have been able to recall specific titles at the time of the interview. They could remember colors of binding, thickness (the fat red books) or location (by the windows) of reference sources they found useful in advising.

The following two comments are from faculty members who seemed to feel that the interview was to be an interrogation:

> I really thought you were going to nail me on not really knowing what the library sources really are, which is true. But

I don't think of the library except as a kind of secondary source where you go for extra supplementary help. If you could put a student on a resource that I didn't know about, I would be utterly amazed, but I would also be chagrined, and I would wonder how in the world you could know about something like that with all the other things you're supposed to know about as a librarian.

I wonder why you haven't asked me how much time I spend in the library myself. And I think you're going to find that most people are going to be defensive to your questions, especially if you had opened up the interview with, "In the last three years you were seen in the library once, and your candidates are in all the time, how does this technique work?" This certainly would lead to an interesting line of questioning! I don't spend a lot of time in the library. Sometime I go over there for a specific mission, for something I don't have. I take eight journals that I want, which I find is the shorter way to keep up, and I buy books on demand.

The following apologetic confession indicates a reason for non-use:

I'm sure that I don't have an adequate idea of what's in the library. Somebody said something to me the other day, when I told her about the Human Relations Area Files, which I must confess I've never used because I can't read the microfiche, she had never heard of the system, nor had any idea that it was here. She said, "You know, one of the first weeks that students come to this campus there ought to be some kind of a tour of the library." And I just looked at her. I almost said: "I think I have a surprise for you--in fact it comes at the wrong time--the tour comes when you only need to know where the bathroom is and where kids your age study." I need the tour!

One faculty member was frustrated with the library:

I get so frustrated over there by having to wait, or by not finding things where I want them to be, or not getting the help I need, or not being able to check out the sources that I want, that I really have built up a library at home, and I work at home. When I have to go to the library, I grit my teeth, unhappily, take a deep breath, and walk over there. When I occasionally find a resource over there I'm always sort of underwhelmed. It ruins my image of the library.

The general vague responses concerning reference or bibliographic source titles may be due to the ways in which these faculty use or do not use a university library. Most faculty advisors subscribe to the journals in their field, and purchase books that provide them with immediate access to the information they need. Their offices contained small specialized private libraries with titles that indicated the narrowness and depth of their individual subject areas. It is possible that the size of their personal libraries was related to their use of university library resources. Many send their advisees to conduct preliminary literature reviews, gathering information which the advisor and candidate can discuss at a later time. Consequently, although at first reading, the initial spatial/color verbal responses to my question may seem amusing, they probably got very close to the manner in which these faculty use the university library. Their development and use of an immediately available personal professional library could also be a powerful modeling influence on the candidates during their dissertation experience, as the doctoral candidates observe their advisors' knowledge and use of bibliographic sources.

This narrowing of the sources available with the current information explosion has implications for introducing doctoral candidates to the process of a literature search. It begins the process with preferential blinders for particular journal titles, association publications, or individual publishing firms. It also is in direct opposition to the testimonies that the library is the heart

of the university. At least one of the faculty advisors interviewed said that his personal collection was the "absolute core" in his field.

Productivity Value of Bibliographic Format

Question III on the preliminary questionnaire (Appendix A) asked faculty advisors to rate the dissertation productivity value of fifteen common bibliographic forms of information in which education opinion and research are disseminated. It was assumed that some formats might be more productive than others for dissertation research. Format was used as a generic term to group various forms in which educational opinion and research might appear, ranging from refereed journals to newspaper articles. The questionnaire asked respondents to rate each format on a 5 point scale (1 very productive and 5 very unproductive). The purpose of this question was to identify possible faculty preference for one format of information over another, i.e., were "books" a more productive source for a dissertation literature review than "journals"? Table 2 lists mean scores in descending order. Data collected with the questionnaire were augmented with interviews that explained the reasoning behind the ratings.

Members of the study group ranked refereed journals as the most productive source for dissertation research. Other formats ranked highly productive include books, dissertations, and the ERIC index, Resources in Education. Formats ranked at the lower end of the

TABLE 2. Frequency Table: Advisor Rating of Productivity of Bibliographic Formats for Dissertation Literature Reviews

Mean	Format	Number of respondents rating format 1st	2nd	3rd	4th	5th
1.41	Refereed Journals	24	5	1	0	1
1.94	Books	14	12	3	0	3
2.03	Dissertations	11	12	4	4	0
2.10	Resources in Education	13	7	4	3	2
2.41	Yearbooks	2	13	6	6	2
2.67	U.S. Government Agency Reports	3	11	11	3	2
2.75	Subject Encyclopedias	5	11	6	7	3
2.77	Research Center Reports	3	11	12	4	0
2.97	Conference Proceedings	1	8	16	3	3
3.22	Popular Professional Journals	1	7	7	8	7
3.86	Legislative Materials	0	1	10	10	8
3.97	Newspapers	0	3	4	8	17
3.97	State Department of Education Reports	1	4	7	11	7
4.23	School District Reports	1	2	1	12	15
4.34	Popular Mass Circulation Journals	0	2	2	11	17

Note. Scale used was 1, high and 5, low.
Not all sources were rated by all advisors.

productivity scale were legislative materials, newspapers and popular mass circulation journals. Differences of opinion existed within these ratings. For example, even though two advisors may have given the same rating to an item, the interviews indicated that they may have had completely different reasons for their ratings. The following paragraphs will discuss responses gleaned during the interviews regarding the productivity of particular formats for dissertation literature reviews with a focus on the more productive formats.

Refereed Journals

Faculty advisors in all areas within the College of Education rated refereed journals as the most productive source of information--possibly because the articles in refereed journals have been evaluated by a group of peers in the subject field prior to publication. Eighty seven percent of the advisor ratings placed refereed journals 1st or 2nd in dissertation productivity on the five point scale. Specific journal titles mentioned varied by division within the College.

The refereed journal format was included in the list of formats to be rated because naive graduate students often ask librarians for help in finding "the refereed journal." The concept of refereed journal appeared to be second nature to some faculty, even if they didn't use the phrase, for example:

> I don't think I've ever said "refereed journal" to anybody in my life. I say, "look in the Journal of Applied Behavioral Science or Psychological Review." I give them a name of a journal, and once in a while they might ask me about a journal, something like "What about the Journal of Educational Research ?"

> And I'd say, "Last time I looked at that it was a rag--I wouldn't bother." But I don't ever say refereed, I just know there are some journals I respect and some I don't respect.

One faculty member indicated his directness with doctoral candidates:

> If they do not know what a refereed journal is, they will know when they come through my program. But, certainly I'm happy to tell them. Refereed journals are primary sources, and I would specifically indicate journals they should look at first, that are most likely to be productive. But I could also tell them to go to Psychological Abstracts which only references refereed journals, then I'm guaranteed that whatever they find is going to be Okay.

One advisor was concerned about the elitism of refereed journals:

> If that's what the people are reading, than that's what we should be doing. I have a friend who used to write for two popular magazines in his field of human sexuality Captain Billy's Whiz Bang and another one called Sexology. Because he wrote for those, he's been under a cloud ever since. He said the reason he did it is because that's what people read! It's just like Playboy, there are some excellent articles. So, it can't just be refereed journals in any field.

The comments regarding refereed journals reflect the maturity of the variety of disciplines within the College of Education. Mature disciplines, such as psychology, will have a variety of refereed journals (Lancaster, Konopasek & Owens, 1985), while developing disciplines require time for parallel development in the publishing world. The world of journal publication is very competitive, and publishing houses need to be certain of the potential financial rewards of producing a source that may only appeal to a small population. This has an impact on literature reviews in smaller or

developing disciplines, since the library may not subscribe to the journal. Richard Dougherty (1987), Director of Libraries at the University of Michigan, reports on the dilemma for academic research libraries in an article predicting serial pricing for 1987:

> Many libraries are now reeling under the impact of the escalation in the subscription prices of many journals. The principal culprits are publishers of foreign journals, but there is also evidence that suggest the prices of some domestic publications have increased more than can be explained by inflation. Library Issues has received reports from numerous libraries, and while one cannot draw any statistical conclusions, the anecdotal evidence suggest the following:
>
> . The overall rate of increase of foreign subscriptions exceed 20 percent. Some libraries are experiencing increases that exceed 30 percent.
> . We can expect the rate of increase for domestic publications to fall between 8 and 10 percent by year end.
> . Libraries with the greatest commitment to foreign language publications have been the hardest hit.
>
> There are no easy solutions. Some institutions will elect to pay the higher prices, no matter how stiff. Other will decide not to and will initiate cancellation programs, becoming more dependent on library resource-sharing programs. More researchers will find themselves earmarking larger portions of their grants for the purchase of expensive publications in order to support ongoing research and development. Some subscription costs have become so high that publishers expect more researchers to initiate their own cancellations of institutional subscriptions.
>
> What we are witnessing is the beginning of a breakdown in the system of scholarly communication which we have taken for granted since the end of World War II . . . To a certain extent, the higher subscription rates regularly charged to institutions also serve as a form of subsidy . . . The problem now is that the recent escalation of prices is throwing this scheme of subsidies out of balance . . . It ultimately impacts faculty and students--particularly graduate students--and is an issue that merits the attention of the entire campus community. (p. 4)

When coupled with decreasing university budgets and the failing

American dollar overseas, the serial budgets for journals peripheral to the overall mission and goals of the college curriculum are most vulnerable. This places the additional burden on the doctoral candidate to schedule enough lead time to allow the library to borrow required references from other libraries.

Eugene Garfield, founder of the Institute for Scientific Information, publishes the Social Sciences Citation Index (SSCI). It includes an annual tabulation identifying the scholarly journals that are most heavily cited. One of the measures Garfield employs is the "impact factor", defined in the SSCI Journal Citation Reports (1985) as:

> A measure of the frequency with which the 'average article' in a journal has been cited in a particular year. The . . . impact factor is basically a ratio between citations and citable items published . . . . The impact factor is useful in evaluating the significance of absolute citation frequencies. It tends to discount the advantage of large journals over small ones; of frequently issued journals over less frequently issued ones (weeklies vs. quarterlies or annuals); of older journals over newer journals. In each such case the first is likely to produce or have produced a larger citable corpus than the second. All things being equal, the larger the corpus, the more often a journal will be cited. The impact factor allows some qualification of quantitative data. The qualification is algorithmic and objective, but nonetheless useful in journal evaluation. (1985, pp. 12A-13A)

Section 8 of the 1985 SSCI Journal Citation Reports organizes journals by category, and then ranks the titles by impact factor. The subject category of "Education & Educational Research" listed the following titles as having the top five impact factors: (a) Educational Research; (b) Review of Educational Research; (c) Reading Research Quarterly; (d) Sociology of Education; and (e)

Elementary School Journal (p. 136).

Section 2 of the 1985 SSCI Journal Citation Reports reports that the top cited journal in 1985 was the Archives of General Psychiatry, cited 13,113 times. The top cited education related journal was Child Development, cited 5,567 times, and was listed sixth in the total ranking (p. 19).

This type of indexing analysis is important to both advisors and doctoral candidates. It is most useful to doctoral candidates working in mature disciplines since it works with refereed journal titles. Doctoral candidates studying a problem in developing disciplines, those that do not have a mature publishing field established, and limited (if any) refereed journals, will have problems locating information. First, the library may not take the financial risk of subscribing to fledgling or developing journals. Second, most journals are not immediately indexed in traditional indexing sources. Education Index and ERIC's Current Index to Journals in Education reexamine the journals they index on a periodic basis, but try to maintain a stable approach to indexing the literature of the field, and make very few changes. Therefore, advisees may need to depend on the personal libraries of their advisors, or start their own subscriptions to esoteric journal titles.

Books

Books were rated as the second most productive format for dissertation literature reviews, with 78% of the advisor ratings placing them 1st or 2nd in dissertation productivity on the five point scale. None of the faculty advisors interviewed volunteered comments regarding books. This may be because books are so common in higher education that no advisor felt the necessity to comment. However, it is not true that all doctoral candidates know how to find books in a research library. No faculty member mentioned the complexity of using Library of Congress Subject Headings, or of using sources that would acquaint doctoral candidates with books that are not in the university library. Sources that could be used to identify additional book sources range from Books In Print to cooperative networks such as the Research Libraries Group (RLG) or Online Cooperative Library Catalog (OCLC).

None of the faculty advisors, who all had published books and or journal articles themselves, mentioned the time lag required for the publication cycle. For example, a book with a 1987 publication date was probably completed in 1986, and nine months or more were necessary to print and distribute the title. Library ordering, cataloging, classifying, and processing time extends the period. Therefore, a book with a recent publication date could be misleading for topics that required currency. For example, the currency of information would be more critical in brain research on memory, than in

philosophical theoretical approaches to curriculum development.

Dissertations

Sixty-seven percent of the advisor ratings placed dissertations 1st or 2nd as a format in dissertation productivity on the five point scale. Faculty advisors responded with a broad variety of reasons for their rating of productivity with the format of dissertations. Some faculty members said they used dissertations as models and frequently recommended specific dissertation titles. One faculty member thought that dissertations were the last place doctoral candidates should turn for information. The comments below were selected to show the range of responses. The first comment is from an advisor who did not care for the use of dissertations:

> Dissertations? I guess I marked them low because of my own experience of trying to get information from them. They're not really generally high-quality documents, I don't find, but it makes sense, people are working at it for the first time. They vary a tremendous amount, some are pretty high quality, some aren't very good at all.

The following advisor liked to use dissertations as models:

> I have them look at dissertations in order to take a look at the review of the literature. Strictly for that purpose, to look at the references. If I know that there have been two or three different dissertations written on the same thing, I recommend that they take a look at those dissertations and particularly at the bibliography to see what kinds of journals and what kind of references they have.

Two advisors diminished the importance of the dissertation format:

> A dissertation is an advancement of knowledge. If it's a significant advancement of knowledge then it's publishable. Therefore the main criteria for a dissertation is its significance--which means does it make a contribution?--which means it should be published. However, you can't know if it makes a contribution if you don't know the literature.
>
> Quite honestly, the dissertation as a product itself is probably of less interest to me than the publishable article that comes out afterwards. The dissertation is, to a large extent, a learning experience for the student. And that's where a lot of that massive literature review comes in. If they are really doing anything that's worthwhile, then what we need to do at that point is stop, shrink that literature review into about four paragraphs and then present the information with a substantially improved results and discussion section, that then are submitted for publication. That's the way we get stuff disseminated--that's the way we get information sent out. And in all honesty, as a professor, if I've got a doctoral student, I've got to help that person get a job, right? A large part of that is getting them published. So, a dissertation should probably produce at least one if not two or three papers. The reason you have Dissertation Abstracts is because very few people consult dissertations, with all the other material you have in the library, very few people read them, especially if they are on microfilm. Most dissertations are laborious and few of them are written very well. I expect a journal article or a chapter in a book to not only have all the content that would be in the dissertation, but to have much more attention to the quality of the writing. I mean, think about the pressure people are under when they write dissertations--that's not the type of pressure that produces sterling prose!

One advisor used dissertations in a formal way as part of the advising process:

> Let me comment on dissertations. I have some qualitative suggestions. I have them study dissertations from the present backward, with the idea that the most present dissertation most recently listed should have a good list of all the work that's been done in the field. What I try to get students to do is to look at the historical evaluation in every dissertation--did the

> author really dig in? what is the state of the field? what is the state of the art? and then go backward. The ordinary thing is that students check from the first and the oldest dissertation, like it could be 1929, and they go plodding along from there. If they go from the present backward, they get all the key references that have survived time. I also suggest that they track major American university dissertations, like from Texas and Texas State which may be different from Yale or Chicago. I have them take a double look at these dissertations which may or may not be any better.

These opinions differed from findings by Boyer (1973) in his book The Doctoral Dissertation as an Information Source, and Davinson's (1977) Theses and Dissertations as Information Sources. Boyer states:

> With each degree conferred, another research project has been completed and the results reported in a dissertation. Each dissertation represents a refereed paper, supervised by an advisor whose competence in the field is acknowledged by the position he holds within the university and subject to the criticism and guidance of two to six other similarly distinguished individuals. The research completed under such stringent conditions surely is of no less value than that completed in laboratories and workshops outside the halls of academe. (p. 13)

The faculty advisor comments support the reality that dissertations are an elusive publication format. They require special indexing sources, such as Dissertation Abstracts International, and not all schools or colleges participate in sending their dissertations to DAI. Until recently, dissertations could only be searched by broad subject area or key words in the title. Machine readable form and interactive computer searching capability now offer the possibility of searching the words in the author-written abstract describing the dissertation. Each of the words in the abstract of the dissertation (currently limited to 350) now have additional significance if the

doctoral candidate wants his/her dissertation to be found and quoted by others. Once a potential dissertation title has been identified, the doctoral candidate usually begins by checking the holdings of the university library. If the dissertation is not part of the collection, the candidate has a series of options. These options range from purchasing a personal copy of the dissertation to beginning the procedure to borrow the dissertation using interlibrary loan procedures. The most important drawback to the use of interlibrary loan is the time period involved. The university library must request the dissertation from other libraries using a standardized set of procedures. The request goes to the first library thought to hold the dissertation. That holding library checks its shelves to locate the title, and, if it is there, the holding library determines whether it can be lent. Many times, with popular current topics, and few dissertation titles, the host institution may be deluged with requests, and therefore ask borrowers to queue up. This additional time required is usually unacceptable, and personal copies are not affordable for many graduate student budgets, so it may be necessary to go without the source.

Repp and Glaviano (1987) studied the handling, cataloging, classification, and subject analysis of locally produced theses using interlibrary loan offices at four academic libraries in Ohio. A questionnaire was mailed out with each dissertation, and a record was maintained listing the borrowing institution, the subject of the dissertation as identified in the dissertation or by the department

supervising the dissertation, discipline of the dissertation, and date on the title page. Their results showed that of the dissertations borrowed, the highest percentage (43.4%) were in academic disciplines from the social sciences. Of the 43.4% that were in the social sciences, 75% dealt with education, excluding educational psychology. The data also supported the assumption that recently produced dissertations are more heavily used than those written earlier.

ERIC

The Education Resources Information Center (ERIC) has produced indexes to educational materials since the early 1960's. The Center produces the major indexing tools for education. These are two major reference sources and both appear in machine readable form and are currently available on compact-disc. One source is CIJE, the Current Index to Journals in Education, which indexes over 750 education and education related journals. The second source is RIE, originally titled Research in Education, and currently titled Resources in Education, a monthly abstract journal announcing recent reported literature related to the field of education, which permits the early identification and acquisition of reports of interest to the educational community. When ERIC is used in combination with Education Index (indexing over 350 education and education related journals), the two indexing sources offer a range of subject headings, frequencies of publication, and access to a variety of journals.

Sixty percent of the advisor ratings placed ERIC's RIE as 1st or

2nd in productivity for dissertation research on the 5 point scale, and all advisors mentioned ERIC indexing sources during the interviews. The comments ranged from praise to condemnation. The following comment is from a faculty member criticizing ERIC for lack of currency and format:

> I don't even know what Resources in Education is! I find that ERIC stuff almost useless. There's nobody that can do my abstracting for me. I don't really worry much about sending my students into it, because my students don't do ordinary type dissertations. If it's in ERIC, chances are it's not new enough or grounded enough to be important. Plus the fact that I can't read that little stuff [fiche].

Another advisor criticized RIE for its acceptance criteria:

> Generally I find that ERIC includes things that couldn't get published elsewhere and are of less quality.

One advisor felt that ERIC had historical importance:

> My feeling is that it is real important to look at some of the old ERIC stuff. They need a handle on where this line of research started--and what its roots are. That's why, even with bibliographies, even with any article, what I have them do then is check the sources of that article, and then check the sources of that article, and I'm never sure how far back to go."

Two advisors were concerned that ERIC might serve as the only index used:

> I get worried about people only doing ERIC searches. I think that's because if somebody hasn't coded that stuff in your way, you just get key words . . . you may not think of more . . . but those dumb things--they only have a one track mind. So, I think that's crazy, very dangerous . . . it's stupid.

> Doing an ERIC search was synonymous with "doing a literature review." Well, you know yourself, you do an ERIC search, you pick up hardly anything that's significant in the field, you'll pick up a few papers.

The ERIC system has gone through many changes. At the present time the Education Department is investigating limiting the number of Clearinghouses that index and abstract educational materials. The June 3, 1987 issue of Education Week reports that the Education Department has abandoned several controversial proposals to revamp the Educational Resources Information Centers network. However, the department will proceed with its plan to create a marketing and promotional arm called ACCESS ERIC (p. 14). The system, especially at the Clearinghouse level, is responsive to direct criticism. Many of the critical comments may be indicative of the overall problem of dissemination of information in the field of education. As the producer of one of the major indexing tools in the field of education, ERIC is inherently vulnerable to criticism.

Other Bibliographic Formats

The remaining eleven bibliographic formats listed in Question III received less than 50% of the advisor ratings of 1st or 2nd levels of productivity for dissertation research, and were rarely mentioned during the interviews. These bibliographic formats included yearbooks, U.S. Government Agency Reports, subject encyclopedias, research center reports, conference proceedings, popular professional journals, legislative materials, newspapers, state department of

education reports, school district reports and popular mass circulation journals. The comments that were made suggested that overall, these sources could provide useful little gems of information. However, the time necessary to locate the gems was not appropriate due to the imposed time constraints of a dissertation experience. Popular mass circulation journals and newspapers were not considered to be appropriate sources for dissertation research unless popular opinion was a part of the research problem. The following comment mentions a source not on the list:

> Students should be watching the recent papers that are given. They ought to be ahead of their literature. They should look at the programs of the national associations. They should write to people doing similar research. I always feel that my student should be 3-5 years ahead of what any library could find for them. That's in terms of being right on top of their field. That's what gets you into the networks of professors who have a particular interest. Suddenly you know what's going on, and you're looking at papers, and you're meeting other students or researchers. To me it's more important to start networking with people. You do the same thing looking through texts--if you can find the right author, then you've got the key and you're unlocking always. This is what takes the sleuthing around--who are the people who would or could get me into the network? I have good personal networks. I don't feel I ever know very much of what's going on--but I know the people that would know that. If I don't know exactly who, I know other people that have an interest in it, who may have had students working in that field.

Overall Pattern of Response

Faculty members, while looking at the tabulated results from the question on bibliographic format, were asked to analyze the overall pattern of responses from the study group. Two speculations on the resulting pattern follow:

The 1's make sense because what you're dealing with here are things that have credibility, in that refereed journals, the advisory board of the journal is usually people in the field; ERIC does another analysis besides the publisher; all dissertations will have a faculty evaluation, so a dissertation is very much like a refereed journal from my perspective. And books, because publishers make such a great investment in a book, when you submit a prospectus for a book they'll send it out for review, and they'll pick their own reviewers, they're not crazy enough to pick somebody who doesn't know what he's talking about because they're going to lose money if they come up with a rotten book. Their house's reputation is involved in that, and when the book is done they'll send it out for review again. The 5's, unproductive materials, legislative materials, any bunkhead can come up and testify and get in the Congressional Record and you don't know whether they know what they're talking about. Same thing with School District Reports. Mass circulation journals, they're trying to simplify; newspapers, what's true today is not true tomorrow; popular professional magazines will tend to carry a few really good pieces, but they're hard to find.

I tried to spread mine out over the whole thing, I guess other people did too. I think 5's are only by newspapers and popular mass kinds of things, my 2's are all things that tend to have synthesis or reviews of the literature, information analysis stuff. My 3's were all things that tend to be more general--these are like secondary sources. My '1's' are unpublished documents, every once in a while you'll come up with a position paper or a research agenda that's really helpful. So, when you find one, it's a '1,' but overall you're lucky to find them because they're unpublished. So, they don't play a big role in dissertation research overall because they're hard to find, and they're not so plentiful to begin with, but when you DO find one, then that becomes a really important document. I hardly ever think of newspapers, but I know my students in the past have used the New York Times Education Supplement in writing the first chapter when they were setting up the continuity and relevance of the problem that they were looking at.

Summary

Members of the study group generated a sparse listing of titles for bibliographic research tools they considered basic for dissertation literature reviews. In rating bibliographic formats most productive for literature reviews, referred journals, books,

dissertations, and ERIC's Resources In Education were rated as most productive for the dissertation literature review. Sources rated least productive were legislative materials, newspapers, state department of education reports, school district reports, and popular mass circulation journals.

Advising Behaviors in the Development of the Literature Review

Advising a doctoral candidate in the completion of the literature review is only a portion of a much larger dissertation advising commitment. The variety of doctoral student personalities, skills, and research interests make each dissertation advising experience a distinct entity. However, some advising experiences transcend all dissertations. This section will focus on specific advising behaviors the advisors in this study group have developed while assisting doctoral students in the completion of the literature review. In general, the problems expressed in the interviews paralleled those that were listed in the research methods text that was used in the college at the time of the study. The authors of the text suggested eight mistakes in the reviewing of research literature. Those mistakes were identified as:

1. Student carries out a hurried review of the literature to get started on the research project. This usually results in overlooking previous studies containing ideas that would have improved the student's project.
2. Relies too heavily upon secondary sources.
3. Concentrates on research findings when reading research articles, thus over-looking valuable information on methods, measures, and so forth.

> 4. Overlooks sources other than education journals, such as newspapers and popular magazines, which often contain articles on educational topics.
> 5. Fails to define satisfactorily the topic limits of his [sic] review of the literature. Searching too broad an area often leads to the student's becoming discouraged or doing a slipshod job. Searching too narrow an area causes them to overlook many articles that are peripheral to his [sic] research topic but contain information that would help him [sic] design a better study.
> 6. Copies bibliographic data incorrectly and is then unable to locate the reference needed.
> 7. Copies far too much material onto note cards. This often indicates that the student does not have a clear understanding of her [sic] project and thus cannot separate important from unimportant information.
> 8. Fails to use all relevant narrow descriptors when conducting a computer search. (Borg & Gall, 1979, p. 137)

During the interviews advisors were asked if they could comment on whether any of the mistakes listed in Borg and Gall's text would effect the writing of the literature review.

The advisor has a variety of functions to perform during the development of the literature review portion of the dissertation. This section will discuss advisor preferences for the location of the literature review within the dissertation, issues in helping candidates relate the literature review to the research problem, advising behaviors when limited related literature exists, advising behaviors for exceptionally long literature reviews, advising believers of graduate student folklore, advising when the literature is in a foreign language and advising for reaching closure within the literature review. The discussions focusing on the development and actual writing of the literature review took the majority of time in each of the faculty advisor interviews.

The Literature Review as a Separate Chapter

The interviews provided a greater depth of information than a questionnaire could have done alone. When appropriate, the advisors were encouraged to discuss philosophical/hypothetical/organizational issues regarding the actual writing process of incorporating the literature review into the dissertation. About a third of the advisors chose to comment on whether or not the literature review should be a separate chapter of the dissertation. The conversations and comments revolved around questions such as: why include a review of literature in the dissertation experience? is it possible to write a dissertation without a literature review? should the literature review be a separate chapter?

The most heated discussions centered around the location of the literature review within the dissertation. Two advisors suggested that tradition is the main reason the literature review exists as a separate chapter. Their comments explain this precedent:

> No, you don't need to have a chapter called the literature review. I think the only reason everyone has a chapter called "the literature review" is because that's the easy way to do it. They think the faculty requires it.
>
> We demand a literature review because it's traditional . . . meaning that recently some departments are moving away from having a complete review of a literature area. For example, some departments are saying, "Put it in a publishable form," which typically means cite the few references that are most relevant, briefly discuss them, and zip right into your methods section. Published articles would typically only have two typewritten pages maximum to do an introduction.
>
> Ours is traditional, in the sense that we review the literature completely, forget the length, and then just take the major focus areas related to the topic you're writing on. In

> that sense it require you to dig around in the literature and cite a lot of data and references. Primarily we're looking for published research in journals [note: the advisor pounded on his desk with his fist for each of these words] as the primary sources.

Two advisors felt very strongly that the literature review should not be a separate chapter. They felt that very act of separating the literature and placing it in a different location in the dissertation removed it from the research it was intended to complement. Their comments explain their positions:

> I've thrown out Chapter 2 as a ritual activity. My feeling is that appropriate literature review pops up throughout a dissertation as needed. When you start talking about the people in your study, if you're doing one of those super esoteric ones, then that's when you do your review of the people, and you don't set it apart as a separate chapter. When you get into method, because the method is new and exciting, than that's the place where that occurs. To keep it and make it manageable I'd guess I'd rather see it in the first two paragraphs or the first section of the relevant chapter, so it's still a foundation. But, because of the different kinds of reviews that people make, it could occur in three different chapters. One place where you talk about your statement of the problem, another with research design, and then how you're going about it.

> I think you're visualizing a literature review as a distinct chapter--which is something I try to steer the students away from. I've read plenty of dissertations and been on many committees where that kind of problem arises. The literature review just sits out. That's one of the problems in having a chapter called literature review. I try to discourage that because it does lead to the notion of something distinct and independent and unrelated to the formulation of the problem.

Less than a third of the advisors chose to discuss the location of the literature review in depth. This could mean that the other two-thirds do not care, or at least do not have strong feelings regarding the placement of the literature review. For the whole

dissertation writing process to go smoothly, it appears that clarifying the preference of the advisor would be in order. This should be initiated by the advisor at the very early stages of writing the dissertation. An alternative to a separate literature review chapter could require new cognitive approaches for both the advisor and the advisee. The advisee could be coming to the dissertation portion of the doctoral program having been instructed by professors who constantly referred to the "five chapter dissertation format" of introduction, literature review, methodology, analysis, and conclusion during the course work for the doctoral program. Unknowingly, the doctoral candidate may have internalized this superstructure for the dissertation. The amount of experience in the field, coupled with the experience of chairing multiple doctoral dissertations may cause an advisor to see alternative organizations as more appropriate for some dissertation topics than others. Alternatives to the traditional separate literature review chapter, with the advantages and disadvantages of each organizational location, require additional guidance from the advisor.

The comments cited imply that the advisors who prefer a separate chapter assume their advisees can easily comply with this organizational scheme. With a separate chapter, the doctoral candidate could try to place all the related literature in that one chapter, and may refer or highlight some of the research sporadically in other portions of the dissertation. Possibly this is because the advisors feel that there is no reason to change, and the fact that

their advising may be easier because the dissertation can be approached with a series of discrete beginnings and endings. The dissertation can be written a chapter at a time, with a multitude of other dissertations that can serve as examples of organization. The separate chapter organizational scheme also takes the risk of the doctoral candidates not relating the literature review to their research problem. The following advisor comments describe the problem:

> Too many people think that the literature review is routine. Time and time again I've read a dissertation and tried to figure out why I should take the time to read the literature review chapter. Usually there is not a single sentence in it that has to do with the study, no connection at all. For example, students will cite study after study. If I ask how it "fits," they will say, "it's in the same general area." That should never be done.
>
> Dissertations I have been involved with often have too many statements of the problem. And then a million literature cites. Often the student is driven by "they" . . . "they who say I have to do an experimental study" . . . I usually handle this by saying, "Bring "they" in, sit them down, and let's talk."

The comments from advisors who prefer an integrated literature review imply that they spend some time counseling their advisees in this organizational decision. The advisors need to counsel the doctoral candidates in the methods of integrating the appropriate literature throughout the dissertation. This approach requires a different cognitive approach to the literature review. The appropriate literature needs to be cited throughout the dissertation, and woven into the writing in a different manner. The literature cited could relate to a point just made, a comment just cited, not

just to other literature already cited or summarized. With the literature woven throughout the dissertation, the advisor and advisee must struggle to achieve balance and cohesion on a much larger scale.

An underlying, and unmentioned, dilemma in both organizational schemes is the role of the dissertation committee. The advisor and advisee should be aware of committee member preferences concerning the location of the literature review. If even one committee member has a strong minority opinion, it should be acknowledged during the early proposal stages of the dissertation. This awareness is necessary in order to avoid any rewriting or relocation of the literature review in the final stages of the dissertation experience.

Defining the Purpose of the Literature Review

The interview schedule did not include a question that asked the advisors to define the purpose of the literature review chapter. I chose not to ask this question directly based on my experience of working with faculty advisors, and listening to their familiar, commonplace, untelling platitudes that gave the illusion of defining the literature review, but actually provided little substantive assistance. These phrases included terms such as "comprehensive," "all encompassing," etc. The series of questions used during these extensive interviews provided an opportunity to get past the plastic facade definitions. As a natural progression from discussing the location of the literature review, some faculty advisors, when necessary, defined the purpose of the literature review in order to

provide additional guidance for their doctoral advisees. The representative comments that follow were made during the discussion of the dissertations the faculty advisors had recently chaired. Since familiar dissertation literature reviews were used as examples, the advisors gave more concrete definitions of the purpose of the literature review portion of the dissertation. One advisor commented that at times the advisees get over-involved and forget the purpose of the review. When this occurs, the advisor provides guidance through a definition:

> I normally say something like this: The literature review ought to do three things. It ought to: 1) spell out the problem, what the field of study is, one ought to be able to read the literature review and get that; 2) it ought to trace what's known and what's not known about that in the field, so you have an introduction, overview of the field, and reporting of key studies; and, 3) at the end, some kind of summary statement, "We know this, we don't know this, and therefore this is my study." So, that's the logic of the literature review chapter as I see it.

Another advisor added additional criteria:

> There are certain elements within a literature review. One, I want to see currency. Two, I want to see a broad review that includes books, periodicals, interviews or whatever. Three, I want elements that will deal with each aspect of the study. Four, I don't want it longer that 35 pages.

The location of the literature review portion of the dissertation, and the definition of what it should include, vary with advisors. This range of opinion indicate that these two initial points should be discussed at the very early stages of the dissertation writing experience.

Advising Behaviors When Limited Related Literature Exists

Three advisors discussed the dilemma of the advisee's inability to locate useful literature on a dissertation topic. This problem occurs when the topic is very specialized, extremely narrow, very current, or relatively unimportant. Advisors often recommend that the advisees cover the "related literature." This advice sometimes compounds the problem, because the candidates can either relate everything to their topic in some way, or the candidates are blocked when pursuing literature because they feel that absolutely nothing relates to their problem. A candidate who has not explored all aspects of the concept that defines the study problem can expect to have difficulty relating the potential literature to the dissertation. The following advisor comments describe two specific examples where the candidates could not locate literature directly related to their dissertation topics:

> She did hers on experiential learning in outdoor schools. She was finding a lot on the effect of outdoor schools on learning about nature and things like that, but she wasn't finding anything on outdoor schools as related to literature learning or on university students. So, I referred her to journals that might deal with the broader topics of experiential learning and student leadership.
>
> As a matter of fact in that particular topic, there really isn't much that's been done. Sometimes that's the case. Especially in topics like experiential learning--there isn't as much as there is for something like teaching effectiveness.

> Private reading clinics, there was no literature, so I worked with her to select things that were closest. There is some literature on university reading clinics, so since her study was kind of tangential to that, she had some evidence describing university reading clinics and drew some parallels in her study, "from what we know about university reading clinics we might"

> and this led into the questions she might formulate about the private clinics. Another continuing theme through her literature review was why people want to use private reading clinics, and the assumption behind the whole thing is that therefore this study is worth doing. If there's going to be a greater demand kind of stuff, so she had a little about the development of the voucher system and where that currently is, and a little bit about the continuing number of students who fail, and another little thread about the need for adults to continue their reading. So, none of them directly related to her topic, but they demonstrated things that led up to her question. She didn't just jump out of the woods with this idea, but had some suggestions that maybe it would be worthwhile to look a private reading clinics.

The advisor's comments suggest that when a dissertation topic is either in a developing scholarly area or is approached from a new perspective, the advisor should help the candidate reflect on the initial selection of the topic. This joint reflection by both the advisor and the doctoral candidate should result in outlining the foundations that prompted the dissertation question. These foundations could then serve as an outline for the related literature to be reviewed.

Advising for Exceptionally Long Literature Reviews

A common problem identified by the advisors is for the candidate to become over-involved in the literature review. In such circumstances the literature review takes on more importance than the dissertation problem. Unless the purpose of the dissertation is to review the literature in depth, this is generally not appropriate. All advisors indicated that they had dealt with this problem. Four solutions that have been successfully implemented follow:

Occasionally I will say to a student, "You have written this literature review as if it were an entirely separate project--I don't want to know everything that's known about this subject; so go back through your literature review and eliminate that material that isn't directly related to what it is you plan to do." It is fairly common for the student to reduce the literature review by as much as 50% before I will say, "yes, go on."

If it's too long, I help them focus on issues. First of all, I don't let them get to 60 pages. I set the parameters right off the bat. I say, "Hey, if you can't tell me that you know enough about this issue to warrant its investigation in 30 to 35 pages or less, than you're in big trouble. This is not a book. This is not a series, this is not a thorough review of literature. It is just one aspect, one chapter of at least five chapters you're going to write."

For example, I had a student trying to evaluate the community school and noncommunity schools in Alberta, Canada using ten major variables. He had to do a review of literature on what the evolution of community education had been in Alberta. Secondly he had to do a review of literature on evaluation, because that was his focus. Thirdly he had to do a review of literature in terms of evaluation studies that had been done in community education in North America. And then he had to tie it together. And the way we figured out what you have to do, is to ask what's involved? Well, community education in Alberta's involved, Okay so you have to do a review there. Okay, what else? evaluation, okay, so you have to do a review of evaluation in community education. And then thirdly you have to do a review of evaluation in Alberta--has any of this been connected? So, it falls in a logical sequence.

We've been depending upon people to write extensive treatises on their review of the literature, assuming that if they covered every possible reference that ever existed than that meant that they knew it, and I'm not confident that that's true. In fact, I think it would be much more difficult to write a 5 page review of the literature than it would to write a 25 page review of the literature. It's much more work for most people--which is why they don't take a 250 page dissertation and publish it, they have no idea how to get it down to ten pages.

I suggest to students that they have <u>two</u> bibliographies. One would be the literature actually cited; the other would be a comprehensive bibliography of the field, of the literature that seems associated with the field but wasn't, for whatever reason, incorporated in the text. Everything they read may not be relevant to what they're doing, but may be relevant to the field as a whole.

The comments suggest that prior to the writing of the literature review, advisors need to make their advisees aware of their expectations of the approximate length of the literature review. The solutions suggested indicate, once again, that advisors hold a variety of strong opinions regarding the literature review. The solutions suggested touch on other aspects of the literature review. For example, the initial solution, to eliminate material not directly related, could be handled in an initial discussion and outlining of the literature review portion of the dissertation. The second solution, to focus on issues, may continue the problem of an overly lengthy literature review if the doctoral candidate attempts to do a historical review of each related aspect of the newly outlined chapter. An additional solution would have been to not only focus on the issues, but include a page limit for each issue. The third solution, focusing on extensive treatises, is actually an opinion regarding length, it does not offer any guidance to the doctoral candidate other than keep it short, and do not try to cover everything. This type of advice needs to be more specific in order for both the advisor and the doctoral candidate to have a clear vision of the literature review. The final solution, to have two bibliographies, offers a compromise for the advisee who wants to include all the sources found relating to the literature review, while still keeping the review at an appropriate balance with the other aspects of the dissertation. The problem with length may have arisen from graduate student folklore, which will be discussed next.

Advising Believers of Graduate Student Folklore

A common phenomenon in any culture is for the elders in that culture to inform younger members of expected behaviors as they mature, especially during the rite of passage into acceptance into that society. If the world of higher education is considered to be a culture, the dissertation experience, particularly the oral defense, could be considered analogous to a rite of passage ritual. Extending the mystery of the rite of passage are tales and folklore that are passed along through the generations. Jan Brunvard has studied legends as cultural symbols, and explains:

> Legends can survive in our culture as living narrative folklore if they contain three essential elements: a strong basic story-appeal, a foundation in actual belief, and a meaningful message or "moral" . . . People still tell legends, therefore, and other folk take time to listen to them, not only because of their inherent plot interest but because they seem to convey true, worthwhile, and relevant information . . . urban legends gratify our desire to know about and to try to understand bizarre, frightening, and potentially dangerous or embarrassing events that may have happened. (In rumors and legends there is always some element of doubt concerning where and when these things did occur.) These floating stories appeal to our morbid curiosity and satisfy our sensation-seeking minds that demand gratification through frequent infusions of new information, "sanitized" somewhat by the positive messages. Informal rumors and stories fill in the gaps left by professional news reporting, and these marvelous, though generally false, "true" tales may be said to be carrying the folk-news--along with some editorial matter--from person to person even in today's highly technological world. (Brunvard, 1981, pp. 10-12)

One such myth, that directly concerns graduate student behavior while writing the literature review portion of the dissertation, is what I am choosing to label the "mystery person with a citation" myth.

The story, which varies slightly depending on the storyteller, always includes the following events: (a) it was a dark and stormy day for the oral defense; (b) just as the dissertation committee chair introduced the doctoral candidate, an unknown stranger silently entered the room and sat in the corner; (c) just as the candidate finished the description of his/her study, the mystery person leaped out of his/her (though it usually is a man) chair; and (d) waved the mystery citation in the air. The mystery citation is a publication that proves the entire foundation for the dissertation is inappropriate; or it is a similar study that preceded the dissertation, making the dissertation appear to be pure duplication; or it provides proof that the statistical or methodological technique employed in the dissertation is erroneous.

Doctoral students who have heard this myth, and seemingly fear it to be true, develop overly compulsive behaviors while completing the literature review. They explain their behaviors by stating that they are making sure they cite "everything" related to their research problem, in order to defend themselves against the potential attack of the mystery person who may appear at their defense holding the missing citation.

I asked the advisors if they were aware of this doctoral student folklore. Some had not heard the myth:

> I've never heard of that anxiety before this very moment. I suppose the real horror story, but I've never heard students anticipate it as a matter of the dissertation proceedings, would be to get caught on some ethical charge, of having written and revealed something misleading, or having seemed to have violated

a confidence. The ethical problems loom much more than some mythical person showing up at the defense.

One advisor claimed it could never happen:

> I have never in my memory been in a dissertation defense situation where that is even a conceivable possibility. Usually, in our field, there's enough equivocal or contradictory information that another approach is common.

Another advisor clarified that it would happen, but not at a defense:

> This is a bigger myth, and it happens because Educational Psychology is such mean work, and psychologists are such mean people with the way they use their literature and their resources. Anthropologists, they're coming out a little more humanistically--it's part of the discipline to have these great disagreements. And we can live with that kind of stuff because we're dealing with everyday things. So, it's all right to have a disputation--but you wouldn't look for it to happen at a dissertation defense as much as in a professional meeting where you give a paper. That's where somebody jumps up and says, "Do you <u>really</u> believe that such and such, because so and so, or, more likely, because when <u>I</u> was there, doing the <u>real</u> definitive piece, I found quite the opposite." We try to keep that stuff up front, you don't kill people with it as much as get the arguments out, and then bring some more to it if you can. I think those are two different traditions. Ed-Psych people love to eat each other alive, they play a much different kind of, I'll call it a game, but I don't mean to dismiss it--the way they drop name and footnotes.

One advisor emotionally clarified that this story was NOT a myth:

> That's not a myth. I can tell you it happened to two people, both of them relatively famous in the field. One of them was [mentioned a name], a "missing reference" was dropped on the table when he was having his final oral defense, his committee rejected the dissertation, and he had to do another one. This was a major professor I worked with. Similar thing happened with the second person. At the defense it was demonstrated that he had missed an almost identical, not dissertation, but

publication, that answered his hypothetical question. I don't think very many people anymore are scholarly enough to pull that off.

This advisor protects himself from the mystery person:

> There is always that doubt, of course, with some students, that whether or not there has been some study that they simply omitted to mention, that actually did what they did. I think it's always a risk, first of all I only advise in areas that I'm somewhat comfortable in. If you look at the four people on that list (referring to a list of recent doctoral candidates) all the topics were areas that I'm familiar with, and feel that I know the literature, or that I know someone on the committee is totally familiar with the literature if I'm not, and I would of course defer to them. If it was an area I didn't know, that I think it would be a higher risk, and that usually happens on a committee when I'm not the chair.

The responses from advisors indicate that most are aware of this graduate student myth. If advisors openly discussed this myth, or any variations, with their doctoral candidates, possibly while previewing what will happen at the doctoral defense, this possible cause for lengthy or unfinished literature reviews could be forestalled. Such myths and their possible effects on doctoral student behaviors are an area ripe for further research.

Advising When the Key Literature is in a Foreign Language

As universities grow in reputation and status, a parallel growth occurs in the areas from which doctoral students are attracted. Key variables affecting the personal decision to study abroad by third world students include good quality education and the availability of advanced research facilities (Albach, Kelly and Lulat, 1985, p. 13).

The site for this study attracts graduate students from an international pool. Foreign doctoral students, well educated in their home countries, not only need to adjust to American curricular differences, but to library resources that are accessed in ways different then in their home countries. English language proficiency varies, and does not address the conceptual underpinnings, at times uniquely American, necessary to approach a literature review.

The international student poses new dilemmas for the doctoral advisor in advising for the literature review. The student must be able to conceptualize in American terms before approaching any indexing source. Slang and colloquial expressions underscore the reality that articles may be written on many levels. A common situation is for the advisee to apply research techniques learned in American graduate schools to problems in their home country. At times, this means that a portion of the materials necessary to complete the literature review are in a language that may be foreign to the advisor. This advisor discussed the unique problem of a foreign literature:

> The question makes me think about an advisee who did a historical study of the university system in Libya. Well, obviously there wasn't much about it. He did a little background reading on how to approach his subject, i.e., how does one do a study of a university system? But, all of his resources were back there. He went back and spent two years gathering his data there, so there was very little use of our resources here.
>
> This involved a tremendous amount of trust. The resources obviously came from his country, his language, and he had to interpret those for us. The resources that he used, the authoritative sources he cited were all Libyan sources. Occasionally there would be French or English citations from people who had studied the development of university systems, but

> the great majority of the information came from Libyan resources. We had to rely on his judgment as to whether they were the most important, and also his interpretation of what they said. It's a little difficult, and a little spooky too, because you really are taking a great deal on faith.

Although only three advisors discussed this issue, it is important because of the changing nature of the world. As doctoral students continue to study in countries foreign to their own, dependence on English will increase, and the number of primary languages with which an advisor could be asked to be familiar with is not realistic for faculty members in Education. This is a trend that will not decrease. As communication technologies increase, the world will continue to shrink, and our universal educational problems may encourage research for similar solutions.

Advice for Narrowing Literature Reviews by Year

I asked the advisors if they felt that literature reviews could be narrowed by the year of publication of the sources used. This question, was intended to determine how far back in the literature, by year, they wanted their advisees to look. That is, do advisors tell their candidates not to bother with material written in the 1960s?, or material before 1980? Realizing that years of coverage for a literature review would vary by topic, a variety of reactions were expected. Surprisingly, all responses fell into two extremes. The advisors who said yes, the literature review could be limited by year of publication, worked with advisees on topics in rapidly developing fields (e.g., technology, computers). Those who said no, the

literature review could not be limited by year, offered little further guidance.

> I hate to limit by years, people want to do that--but they miss half the boat, or they miss a good portion of it. Most of the stuff's evolved over a long period of time, the world wasn't invented since the first microchip, although students sometimes think that. Where they get that idea I don't know. But to say, "I'm only going to survey the literature since 1975" well, that's nonsense, I wouldn't allow it.
>
> The students really only have to go back five, ten years at the most. They should try to identify the key reference from the last five years, then look at their reference. If there are certain ones from earlier times that crop up, read those. But if a study hasn't survived, don't worry about things fifty years ago.
>
> Unless it's a classic source, I don't want it in there if it's more than five years old because it's not current information.

The advisor's comments indicate that some have strong feelings regarding the years of publication covered in a literature review. Quite predictably, those who felt strongest were involved with topics that have a constantly changing literature, that involves current technology. Their comments suggest that preferences should be verbalized to the doctoral candidate early in the advising experience.

Advising for Reaching Closure with a Literature Review

Sometimes, an advisee gets too involved in the literature review and can not stop looking for more published information. This is a problem because the doctoral candidate may not be able to continue with other aspects of the dissertation. The idea of reading "just one more article" may be an unconscious stalling device on the part of the

doctoral candidate to keep from the actual writing process. As previously discussed, the graduate student myth may be a reason for this. However, a multitude of reasons may exist. The advisors were asked how they assist their doctoral candidates if this situation appears to be developing. Advisors claimed to be very direct in telling candidates to stop:

> This person had real trouble condensing, in fact ended up with a double volume dissertation, which would have been a four volume dissertation if I hadn't said "Hey listen, you've got to stop somewhere, you can't tell everything in the field!"
>
> I say, "STOP, you know enough, what you don't know now you'll have to figure out. You've used up the time that you've got, and if there are some critical things, you're going to have to go read them late at night. But right now you're going to have to start producing. We built a timeline, and the time line says, you've got your proposal in--your proposal was due today--its not in--where the heli is it?" To the answer, "Well, I'm still collecting stuff," I say, "Tough, you're never going to graduate--you need to make a decision of pushing back the date of your graduation, or you have to produce that product, NOW--and here's the outline we agreed to--and I'm pissed off that you didn't follow it like you said you would."
>
> Sure, it doesn't happen that often, but it happens more often than it should. We try to be real clear with people at the front end--and we draw timelines and we try and be reasonable. Our job as professors is in part helping people jump through all the hoops that the university sets up. I mean you've got to turn it in 5 years ahead of time--you have to have completed this before you do that--and all those kinds of things. It's good to create some arbitrary important dates so that you create a sort of self-managing pressure.
>
> The major problem is getting them to focus, and in that process I usually find that some of our students want to do advance theory work in the social science, and they do not have a adequate background in it, so they can quickly get in over their head, and we have to pull them out. Examples are social science topics, like "power." A dissertation may touch on power, and want to add to power, but they don't have the background to get into power. So I'll pull them out of that.

The comments echo the overall communication problem that may develop during the writing of the literature review portion of the dissertation. The first two comments illustrate the advisors required role in stopping the doctoral candidate from spending too much time looking for information that may not exist, or may not be relevant or necessary in completion of the study. The final comment relates to the overall problem of acceptable dissertation topics, which touches on the agreement of the advisor and advisee on a topic. This agreement must come prior to any in-depth literature review, and naturally reflects on the scholarly background of the advisee and advisor. The comments suggest that the most important aspect to reaching closure is for an advisor to tell the doctoral candidate to stop looking for additional sources and to start writing, conceptualizing, joining ideas, making transitions, and finishing the writing of the literature review portion of the dissertation.

Advising for the Actual Writing of the Literature Review

The advisors in the study group considered the actual writing of the literature review, whether as a separate chapter or interwoven throughout the dissertation, to be difficult for most doctoral candidates. The importance of this aspect of the dissertation experience for both advisor and doctoral candidate was evident since discussions on the development and actual writing of the literature review took the majority of the interview time.

During the discussions, the advisors did not raise several of the factors that would seem to affect the ability of a doctoral candidate to write an effective literature review. These factors would include the effect of the candidate's preparation and professional responsibilities prior to entering the doctoral program, their doctoral program course requirements, and the extent of faculty feedback to their writing. The doctoral program in the selected college of education encompasses a variety of majors, and attracts a mature student body with years of experience in various teaching, program, and administrative assignments in a variety of settings.

Doctoral candidates have many growth-producing encounters during the doctoral program, some of which can cause dissonance (e.g., the writing of the literature review of the dissertation.) The process of writing a dissertation is a planned major research experience. A doctoral candidate may have inadequate preparation for it, even though he/she entered the program with a successful career and a history of successfully completed doctoral-level courses.

All the advisors interviewed discussed the difficulty most doctoral candidates have in writing a literature review. Some doctoral candidates lecture and teach more easily and clearly than they write, and others write easily and well--perhaps partially because of positions they held that required them to write. Some enjoy the process of formulating and composing papers, and others do not. Some have an aversion to quantitative research writing, while others have problems with qualitative research writing. The experience of writing a series of term papers, or completing research projects as part of doctoral-level course work, does not necessarily prepare candidates for the dissertation literature review. Most papers during the doctoral program do not require the writer to analyze and synthesize material to the extent of a dissertation, and faculty often do not evaluate writing at the same level as they evaluate dissertations. The writing for the dissertation literature review is synthesis writing on a much larger scale than the prior experience of many candidates.

The advisor must read the early drafts of a dissertation with its potential readers in mind (e.g., other committee members, university colleagues, graduate school editors.) The reputations of both the advisor and the university are involved. The advisor is just as vulnerable, if not more so, than the doctoral candidate in taking responsibility for a well-written literature review. One advisor said that the overall problem was even larger than the literature review, the problem was writing and thinking:

> I've dramatically changed my own attitude about research and writing over the years. I used to think that research should occupy the majority of the time. Now, I would say 80% of the time should be spent on writing and maybe 10-20% on research skills. That ends up with research as the minor thing. That's the mechanical aspect. It's what you think, and what you do with the information that's important and is the sign of the developing of a critical intellect. I think we spend far too much time on the research and not enough time thinking, which is the process of writing.

This section will discuss three aspects of the writing of the literature review that involve advisor interaction at critical points. These aspects include the initial drafts of the literature review, advising for incomplete literature reviews, and advising for organizing a literature review and showcasing important elements.

Techniques Used to Evaluate Drafts of the Literature Review

When a doctoral candidate completes a draft of the literature review and submits it to an advisor for comment, a number of responses occur. The advisor is looking at writing style, organization, and thoroughness. Advisors were specifically asked what they looked for to evaluate "thoroughness," and then I pushed for specifics. All the advisors had a technique that they easily explained. The most common approaches are encompassed within the following four comments:

> I look at the footnotes, who they refer to, and issues that they've raised.

> I don't go through and think about whether they've missed something. You couldn't possibly cover and read <u>all</u> the literature--so it's whether they've looked at the <u>key</u> things, and then if there are some studies that I know about that they've missed, I'll tell them about those.

> I look at the bibliography. If their primary source is four years old, I normally question that. It's Okay to have some older sources in there, but the majority have to be really current. I also take a look at the material I'm familiar with, and I check those very closely to make sure that they're accurate. Obviously I don't go and check all the things in the bibliography, but there are some things that I know, or individuals that I know, and I know how they write, and I know how they think. So, I'll go to the narrative, and if they quote somebody in there that seems way off base, I'll go back to the source and check and see if it's Okay.
>
> Well, the thing is, the advisor will always have parameters in his or her own mind. Whether they're stated to the student or not is a whole other issue. Now eventually they'll be stated, but at what point? And after how much frustration on the part of the student in going back and forth? I don't know. I don't think I go through two, maybe three at the most, drafts of any review of literature because the parameters are set right off the bat. If I were to wait until the second or third draft to set parameters, then it would extend that process another two or three drafts. I don't think it's fair to the advisee, and it's sure as hell not fair to me because I don't want to have to read the review any more than I have to. If I let them know what my expectations are, then that's it.

The comments indicate that the initial reading of the drafts of the literature review should give the advisor an indication of how well the doctoral candidate knows, understands, conceptualizes, and explains the literature that represents the field. No advisor mentioned wanting an exhaustive literature review that cited every known item related to a topic, as is possibly more common in historical treatises. The key phrase used repeatedly was "representative literature." The field can be represented by key studies, key concepts, key trends, etc.

No advisor mentioned the importance of the evenness and flow of the sequences that define the literature review. A good literature review requires an overall flow of ideas and intense attention to

detail. If the writing style is not smooth, the review itself becomes vulnerable to criticism, even though the selection of cited sources is good. The advisors' comments suggest that they have a set of techniques to evaluate the thoroughness of the literature review--which they might well share with their advisees early in the process of writing the literature review.

Advising for Incomplete Literature Reviews

When candidates have completed a draft of a literature review that they feel is complete, they submit it to their advisor. I asked the advisors how they respond to submitted literature reviews that are incomplete. I did not define the term incomplete, so their responses reflect their own conception of incompleteness and cover everything from missing citations, to missing blocks of information. Again, all advisors seemed to be familiar with this problem, but only five discussed the issue at any length. Examples of their responses follow:

> I would ask them to do it again, based only on my knowledge of the field, if I see that they have missed very important sources. Generally I would refer them to a specific book or a specific journal, rather than telling them to look for some other reference source in the library.

> Sometimes it just intuitively seems that there must be more available than they have found. And so I say, "that can't be, that can't represent the whole thing." And I send them back. Other times students will synthesize or make statements based on the reading they've made and what they now know about it, but don't give credit for that to the research. In these cases my motivation was not good.

Two advisors commented that correction of incomplete literature reviews was critical:

> I think that real crummy literature reviews had been the cause for putting a hold on a dissertation. In fact I've been involved in one or two of these. This dissertation right here [pulling from shelf] was more damn folklore than anything else, she had worked for a long time and seemed to think that all the information she'd ever need was already in right here [pointed to his head]. Hell, I held it up at least through two quarters, maybe more than that, damn near a year while the student was forced to read and find out what researchers were saying, and not just listen to the echoes in her own head.
>
> I haven't personally experienced where it had held up a person or denied a person a degree, but, I think it has put a hold on it, it has to be put together up to an adequate level. You keep sending them back, go check with so and so, check this, get this area, what does it say there? And you can continue to ask questions, even if you don't know the answers, at least you know it's not adequate. You keep shooting them back until they finally bring it up to a level that's acceptable and doesn't do irreparable harm to the rest of the body of the work.

Such comments suggest that the advisor and candidate should agree on the chapter's key concepts, and the relative importance of the authors and studies to be discussed.

Advising for Organizing a Literature Review and Showcasing Important Elements

All advisors commented on the appropriate balance of the elements that comprise the literature review. Part of the problem focused on the selection and organization of the literature to be discussed, and the extent of discussion in each section. This implies that important ideas are highlighted through more extensive discussion and key placement. All advisors maintained that the literature review must relate to the dissertation problem, and not to a hypothetical broader

problem. One advisor used an analogy to help his advisees highlight key concepts in their literature review:

> A dissertation is kind of a complete unit of that whole field, and so you're reporting a lot of stuff that's not that important. It's just like you're having a wedding and you're taking pictures of everybody who's at the wedding. Well, not everybody is equally important--but they were there, and you ought to have some sense of who was there. So, you take pictures of them all, but you showcase some people. So the bride and the groom and the parents are showcased, but you have the picture here say, well here are all the relatives on Jim's side, and you have some people and you really don't care if their head is behind somebody else's or not. I think there are a lot of things in the second chapter that ought to just be in the parentheses, you know (Smith, 1987) and then (Jones, 1979) and whole string of them in a row--and you just kind of lump them all and say, "Well, that's [blank] and these would be examples of people who took those positions."

The advisors used a variety of specific techniques to help students who were having difficulty in organizing and showcasing the literature related to their topic. All advisors stated that they tend to tie all comments and corrections regarding the literature review to conceptual issues and clarity. They emphasized that their suggestions regarding the literature review were not just mechanical, editorial changes.

One advisor said that talking with the candidate was not enough, that the candidates needed visual assistance. This advisor continued by drawing a diagram that looked like a tornado:

> I often draw them a diagram. I start out by saying, "Your literature search should start with some broad statement like "We're serving more handicapped kids now, however, we need to know how to teach them more effectively--and we know this about the blind (or whatever). So, you work down to here (narrow part of tornado) and this then is your problem statement." So they should think of that kind of a structure as they develop their

problem statement, but also provide some evidence that they know the scholarly literature related to it.

Three advisors specifically mentioned outlining skills:

I have to teach them about the organization of thought. I ask them to come with an outline. Okay, so they come back, now let's see what we can do with 29 subheadings. One of the things they have trouble with is differentiating between levels of thought. For example, here's a terrifically major theme, this theme is more adjacent, but not as important as that them, and then trying to come up with this as a structure for how they write it.

I force them to organize by issue from the introduction, to the literature review, to the findings. So they're always building, it's always a case argument. The main thing is that they initially know where they're going in the development, and then they can build their citations around that. So, just saying people did all this in this area doesn't work, and that can happen sometimes if you're making a point and you get caught in reiterating what people say.

The review of literature normally falls into logical format. I don't think I've ever had a review of literature in one of my advisees' dissertations that is strictly one long narrative. It breaks up into four, five facets, phases, aspects, variables, and I prefer that they do a review of literature in each one, and tie it together.

This advisor used a huge table to help students organize:

I have found that students often do a literature search, and then they don't know what to do with it when they've got it. In my old office I had a huge table, and I literally sat someone down. This person was a very experienced professional, had worked for 10-15 years, very competent. But the ways of organizing a complicated dissertation literature review are simply unknown to people. So, what I would do is say "Okay, put your cards out on this table. Take a pencil and put up in the corner of the card what you think the main topic or contribution to the dissertation that was." Then, to the astonishment of the student, you find 10 cards in one pile, one card here, three here, and then you say things like, "What does that tell you?" Well, that tells you how to topicalize your literature search. I find that a very, very difficult phase for students--how to topicalize the literature search.

After the ideas are grouped, these advisors identified another problem:

> The kinds of things that I get are "paragramed"--a literature review that looks like an annotated bibliography. They have one paragraph per study, without any real clear thread or conclusion on how these studies relate to their problem.
>
> Another crazy thing they have trouble with is "clumping." They don't know how to clump references. They've never done that, and it's incredible because sometimes you get a first draft where they say, "Joe Bloke said this and Suzie said this and somebody said this and their friend said this." And then you say, "Yeah, but what this person said is theoretically related to what this person said, so that you've got to start your "clumping" system, where you say, "it looks as though the major writers in this field talk about this theme."

A related problem that two advisors commented on involves the dilemma of advising a candidate whose writing skills are quite deficient. This may be due to the problems some foreign students have with the English language, but also because some intelligent competent professionals find synthesis writing to be tortuous, which is exacerbated by the fact that their educational positions require higher levels of verbal fluency and interpersonal skills than writing skills. Two advisors commented that they refused to solve this problem by attempting to teach the candidate to write effectively:

> It gets to the stage where I just do a couple of pages and say, "That's it, it's not right yet, you discover what's right." I even go to the next stage and say, "You need to hire a professional editor because you're not capable of actually putting that together, and if you're ever going to get this thing through, it's going to have to be edited."
>
> I say, "I'm not going to teach you to do that," and they get upset with me. "I'll tell you what's wrong, and I'll make suggestions on who to go to, but I'm not an editor."

> I remember one faculty member here years ago, I visited his office one night, he used to type on yellow paper, and you'd see the students' white paper, with yellow pieces stuck all over it. I said, "What are you doing?" He told me he was writing his 85th dissertation. I won't do that. I want the student to hold their head up when they walk down that aisle. I don't care if they like me or not. I want them to be able to say "I did this."
>
> In a doctoral dissertation situation, my function is to throw light on the door handle--but they have to turn the knob and walk through.

All advisors spoke knowingly and emotionally about the problems candidates have in organizing and showcasing the literature review. Their comments suggest that advisors might encourage their advisees to back away from the literature prior to writing the chapter and to outline the major points in the review. It is also possible that more writing experiences that require the conceptualization and organization of smaller groupings of literature (with provisions for high levels of critical feedback) should be built into the doctoral program prior to the dissertation experience. As it is, doctoral candidates write a series of course papers during their doctoral program, but many are returned with short cursory corrections or feedback, sometimes as brief as, "good ideas, need development." The problem may not be a lack of writing experiences, but the limited amount of detailed criticism the candidates get prior to the dissertation experience.

All advisors commented on the difficulty of writing the literature review, and many suggested that the candidates' problems were highly individual in nature. Possibly because advisees' problems were so idiosyncratic, they tended to use the first draft of the chapter to identify potential problems, and to decide on their

advising strategy. This strategy could range from detailed step-by-step guidance through the formulation and writing of the literature review, or very limited direction, in which the candidate makes the decisions and the advisor responds to them in a general way.

Advisor Self-ranked Behavior Regarding Elements of a Dissertation

Question IV in the preliminary questionnaire (Appendix A) was developed to discover how the faculty advised different portions of the dissertation. The question involved a forced ranking of the five traditional elements of a dissertation, often manifesting themselves as chapters. These five elements were: (a) the introduction: the social and education context of the problem that defines the dissertation; (b) the literature search: the opinion and research literature base of the dissertation problem; (c) the design and methodology of the dissertation study; (d) the analysis and presentation of the dissertation findings; and (e) the drawing of conclusions, implications, and recommendations from the dissertation study. The advisors were asked to rank order the five elements on a scale from 1 to 5, with 1 being the highest ranking. The first aspect to be ranked was time/energy, described on the questionnaire as "the amount of time/energy you typically need to spend with your advisee to develop the element." The second aspect was expertise, described on the questionnaire as "your expertise in working with your advisees on each element of the dissertation." The purpose of this question was to isolate the time/energy as well as the expertise the advisor

brought to the literature review in relation to the other elements of the dissertation. The decision to use a forced ranking instead of a rating was made after a pilot test showed that all elements were rated too close together to allow any substantive differences between elements to be inferred.

The portion of the interview that discussed this item took the least amount of time. It was criticized by some, praised by others. About one third of the respondents refused to rank the elements. They said it could not be done, since all of the elements of the dissertation were interrelated, and if any one of those elements were weak, the whole dissertation would fail. The following analogy by one advisor describes the problem ranking posed:

> It's a bummer because it doesn't convey the interdependence. Somewhere down the line if you take out the literature review, you ain't got the same thing! There's a real obligation on the scholar's part to keep the link as it were, in the roots of the stream of scholarship, to relate to other people's work and effort and interpretation and thinking. I know that's hard to get at. To go back to my analogy, you want to get rid of your bicuspids, or your molars, or some other teeth? They are not the same in number, but they are all necessary for proper functioning.

Another advisor explained the problem in ranking the following way:

> The whole business of reading is part of the formulation of the problem to begin with. The whole phrasing of the question, "the literature search" implies, "here's a week, I'm going to go search the literature." That's completely out of my scheme of things. The formulation of the problem is heavy interaction between what's written in the literature, what one's ideas are, how they integrate, what kinds of methodology might be applicable to it,how you develop your theoretical/conceptual approach, etc.

> Those are all part and parcel of the same thing. And there's flopping back and forth between design and going back to the library looking for something, for reading, and back to research methodology which you pick up in the literature--what kinds of measures you can use, and so on. So it's very difficult for me to answer in this form.

One advisor felt ranking was a problem because of the subject area:

> It's going to be very important that you make some distinctions between research in different areas and realize that education is not a discipline. There's no discipline in education. So, consequently the kind of information you get if you're only talking to people in education severely skews your data. It's all quantifiable information--research design then becomes all important. Have you set up this?, does it pass this kind of test?, this statistical thing?, this?, this? Then you get the data, and you pump the data in. Well, obviously that research then is generated by the methods. It's not generated by "Is this a good question?" or not. And most of the questions, if you've seen any of these dissertations, are so trivial they're embarrassing.

The selection of rank ordering as the construction of the question for this portion was deliberate. Rank ordering does not lend itself to comparisons among people, therefore, mean values for rankings cannot be calculated. The purpose of this question was not to compare, but to merely chart and respond to the resulting pattern as well as to cause the advisors to reflect on their own time/energy and expertise in working with the five elements isolated in this outline of the dissertation.

Table 3 illustrates the total frequency of rankings for time/energy spent for each element of the dissertation as reported by the advisors.

Table 3 reports that 20% of the 24 faculty advisors who responded to this items ranked the literature review first or second in the amount of advising time/energy required, while 60% ranked it 4th or 5th out of the five possible choices. Conversely, 95%, 23 of the 24 faculty advisors ranked design and methodology as 1st or 2nd in the amount of advising time/energy required. Representative comments explain these results:

> Well, very few people, with the exception of the advisor, pay that much attention to the literature review. You have a literature review that is basically done for the proposal, and if they can demonstrate that they have a knowledge of the subject area. I mean anybody can do a literature of 20, 30, 50 pages, so what? You quote a series of individuals, and you weave some of your thoughts into it. It's not so important as far as I'm concerned.
>
> I let them do the literature on their own, it's their responsibility. If you were to ask a different question, but you asked "time and energy." I told you, I say, "Damn it, that library's over there, and there are competent people over there, and that thing is full of information that neither of us know about, it's your responsibility to go over there." Well, that sentence has taken about 18 seconds--didn't require that much time.
>
> Now, if you had said, "In a complete doctoral dissertation, rank or indicate the importance of the literature review to the final product" you'd have got a hell of a lot different answer. You said "time and energy"--it didn't take any energy--I just kicked them in thass and said, "get over there."
>
> The time/energy is in design. I spent half of last night on a topic, because it's not something you can delegate. And if there is something that colleagues are going to jump on each other about, or a student, it's design. Because if you don't do design properly, you're never ever gonna get on track. For a faculty member, it's the area in which they do have some competence, and will go into it, and will spend some time in their area of competence because it's something we know, or should know. So, design does require time and energy because it's very personalized, and it's not something you can delegate or let the student, generally, do by themselves. Rarely can the students do it by themselves.

Table 3. Frequency Table: Advisor Ranking of Elements of a Dissertation on the Basis of time/energy

Ranking	1st	2nd	3rd	4th	5th
Introduction	2	3	3	6	<u>10</u>
Literature	1	4	4	<u>10</u>	5
Design and Methodology	<u>19</u>	4	1	0	0
Analysis and Presentation	1	<u>9</u>	8	6	0
Conclusion	1	4	<u>9</u>	3	7

<u>Note</u>. Scale used was 1, highest and 5, lowest.
There were 24 usable questionnaires.

> It requires not only the advisor's time, but other people's time, the committee's time. And when the faculty get together to talk about a research or dissertation proposal, they talk design. They, none of the committee members, including the chair, may know the literature that well, but the design will frame it.

> People who are preoccupied with design are essentially authoritarian in their personality. As long as I've been here its been that way. If you follow scientific journals, philosophy of science and that sort of thing, they're moving away from the emphasis on design in terms of precision. What we're doing in the social science is what physical science was doing fifty to a hundred years ago. Now they're talking about configurations and approximations, but you see social sciences not having the instruments that are being used in the physical sciences. You know the formulas they use are experimental--they were used to determine soil type acidity--it had nothing to do with humans!

Table 4 illustrates the total frequency of rankings for expertise with each element of the dissertation as reported by the advisors. It reports that 22% of the 22 faculty advisors who responded to this item ranked the literature review first or second in the amount of advising expertise required, while 59% ranked it 4th or 5th. Conversely, 68%, 15 of the 22 advisors, ranked design and methodology as first or second in the amount of advising expertise required. Representative comments explain these results:

> The reason I ranked my expertise as low with the literature review is a reflection of the people who are professional educators in our division. I don't think a prerequisite to get a doctorate is to be on top of the literature. I think that what happens is that faculty will many times be somewhat on top of the literature, more or less, and you spend a lot of your expertise defining a problem and helping them design a study.

Table 4. Frequency Table: Advisor Ranking of Elements of a Dissertation on the Basis of Expertise

Ranking	1st	2nd	3rd	4th	5th
Introduction	6	4	2	3	7
Literature	1	4	4	6	7
Design and Methodology	10	5	3	2	2
Analysis and Presentation	1	3	7	9	2
Conclusion	4	6	6	2	4

Note. Scale used was 1, highest and 5, lowest.
22 questionnaires were usable.

> This gave me a little bit of a problem. My expertise is between the two areas of the literature review and the design/methodology. The problem that I see in students is, first of all, organizing the areas of research, coming up with all the different major areas, and coming up with outlines. Well, let's stick this in here, let's stick this in over here, well what else comes to mind? What about this? Second, I think we should look at the development of assessment and intervention in the area. So, for instance, looking at "syntax in aging," there's a whole area called gerontology you have to get into--and that's a whole other language. But also, people don't know what syntax is, so you go to language literature to find syntax, and specifically narrowing it down to the area of syntax you are concerned with. So, we divide it into areas, for every single area they are to review. So, I put organization here, part of the design and methodology, that's also part of the literature review, they're interconnected.

The overall patterns for both time/energy and expertise in the five elements to be ranked were similar, with Design and Methodology ranked at the high end of the scale, and the Literature Review ranked at the lower end of the scale. Analysis and Presentation rankings were 3rd or 4th on the 5 point scale in both time/energy and expertise. The Conclusion was ranked slightly higher for time/energy, with the highest number of faculty advisors ranking it 3rd; when compared to the ranking for expertise, where the highest number of faculty advisors ranked the Conclusion 2nd or 3rd on the 5 point scale.

Additional Factors Affecting Advising Behaviors

Many factors affect how the advisor works with a doctoral candidate. This section will discuss factors that were suggested by the advisors during the interviews. A minimal amount of time was spent discussing these factors, yet individually and collectively the factors may have a profound effect on the way advisors handle the literature review. These factors include how literature reviews vary in other colleges within the university, how the type of degree effects the literature review, how committee structure influences their behavior as chair, how they read the dissertation as committee members, and recollections of their own doctoral experience.

Literature Reviews in Other Disciplines

I asked advisors to speculate, or answer from their experiences from serving as the outside member of a dissertation committee, on literature reviews in disciplines outside of education. The comments focused on the larger comparison of social science methodology versus scientific methodology. The following comments are representative of the comparisons made:

> Of course there's a lot of bad research done in social science because social scientists so often tend to want to solve all the problems the world has ever studied with one study. Whereas if they'd look at chemists, botanists, zoologists, and physicists, they look at almost a microcosm of the whole field, there may be only fifty people in the world interested in what they are doing.

> I haven't seen many dissertations in other areas. My hunch is that we put more emphasis on the literature review than they do. I don't know if that's true or not. It's just a hunch. I've only seen one other dissertation, and it was in chemistry, and I couldn't decipher it, but it seemed as though there were very few words. My sense is that education has struggled to find itself--so we rely heavily on all the things that have been written about us. I don't know that the other disciplines have that problem--their background and history is well established. There's a certain amount of self-justification that goes in.
>
> I've never sat on a hard science dissertation committee. I've had scientists on committees that my students have had, and have found them very astounded at the level of intelligence of students in educatio... But you know we're the minority school around here, let's face it. I found them very surprised that there's a legitimate body of knowledge and it's very complex in different fields.
>
> There are dissertations in the sciences that are less than twenty pages long, but it takes three years to do. There's a lot of hours in the lab that don't show up as footnotes. The writing of the dissertation isn't so important. These people aren't going to write for a living. They're basically researchers. In the professional schools, and especially in education, our life is to communicate to a lot of people rather than a lab full of white rats. I think that writing ability and the ability to understand and assimilate and summarize information is pretty important. I think that what happens in other fields is that the candidate is doing research for their advisor, who has a grant to do research. They take on these doctoral students, and they work with them, and it's more of an apprenticeship than research. The candidates don't have to do much of a literature search because the advisor has already done it, and he knows every God damn thing there is to know about it, so it would be dumb to have them do a clone version, it's a different relationship.

No advisor commented on dissertation literature reviews in traditional liberal arts disciplines such as history, philosophy, or literary criticism. These disciplines require doctoral candidates to provide extensive literature reviews and have hundreds of years of literature to condense. The recent literature in these disciplines is just beginning to become available in machine readable form, so the

advisees search for relevant literature must still be done manually. No detailed comments were made regarding literature searches in dissertations in other professional schools.

Relevance of Type of Doctoral Degree

I asked the advisors if they required different literature reviews for doctoral candidates pursuing a Ph.D. (Doctor of Philosophy) versus a D.Ed. (Doctor of Education). The initial responses touched on two areas, the change in doctoral requirements overall, and the need for clarification of the distinctions between degrees within the college. Only one advisor said he would advise for the literature review to be done differently based on the type of graduate degree.

The following comments are representative of the advisors concerns regarding the change in degree requirements:

> I think the whole thing went to hell in a hand basket when they stopped requiring French and German for Ph.D.'s--as you can tell, I had to pass French and German--and I think everybody should--that would cut down on my advising.
>
> I think if one aspires to a Ph.D. they ought to be competent and fluent in at least two languages. And by that I do not mean the sort of thing we did when I went through, and that was to translate a couple of pages from a French textbook or a French novel. It took about 30 seconds for everybody in the institution to know which 3 pages those were, everybody who translated those knew at least two weeks before what the pages were, or within 6 or 8 pages which one of two they had to translate. Well, you could memorize the damn thing! So, it was sort of a farce long before now, and the distinguishing feature between the degrees have just gotten so blurred that there aren't any. So, I advise people exactly the same. I would advise for the literature the same even if there were a distinction, the only differences would be that the content and the requirements would be different. I

have just as much respect for a person who shows a practitioners degree, the D.Ed. as a Ph.D., maybe more.

The following representative comments discuss concern that the differentiation between degrees is not clear within the college:

> It's not as clearly defined here as it might be at some other institutions. It used to be that the difference for the Ph.D. was the language requirement. Right not the difference is basically one extra sequence in statistics, and supposedly the Ph.D. dissertation is more research based. I think one has to be very careful. There are several folk on the faculty who have D.Ed.'s and are somewhat conscious about the fact that it may be a lesser degree. My feeling used to be that once you had the title "Doctor" no one was going to check, but they do when you're looking for jobs.
>
> I think it's a big scam. There's no difference between the degrees. They ought to do away with one or the other. At one time the whole argument was that the Ph.D. was more research oriented. I've got some D.Ed. individuals who have written a lot better research than Ph.D.'s I don't advise any differently for any aspect of the dissertation.
>
> The D.Ed. in the department, not the college, is strictly a practitioners degree. The other is a pseudo-research degree. It's a phony to me. I won't take any Ph.D.'s. In fact, until now, I used to be the only one who would take D.Ed.'s I was told, "It's not a respected degree." Hell, I have more respect than I can handle. West of the Mississippi these distinctions are not important, East of the Mississippi they are. I'm a practitioner. I use research, but I don't do any. I'm just not interested in the time it takes to look at data--I want to be doing something. Harvard University pioneered the D.Ed., it's a practitioners degree, we train people to be consumers of research.

Only one advisor stated he would advise differently for the literature review:

> I would advise differently in one respect. I think a D.Ed. document is not a research document in the same sense. It's not going to be an experimental study--so the focus on the methodology would be much different. Otherwise most of the

> conceptual literature, the literature related to the theory and ideas involved, and the literature related to practice would be much the same. The D.Ed. would require more literature related to actual practice than the Ph.D.

The comments suggest very minor differences in the literature reviews for different types of graduate degrees, and point to the need for clarification within the college.

Behaviors as Members of Dissertation Committees

I asked the advisors if they changed their behavior in relation to the literature review when they served as committee members for a dissertation. Comments were brief and touched on factors such as the total makeup of the committee, responsibilities of the chair of the committee, responsibilities of the members of the committee, and concern about candidates citing work of members of the committee. The makeup of the committee was important:

> I'm at the point now, I've been here long enough, that I can really say there are some people I won't sit on a committee with at this point. It's just that I don't think it would be good for the student. I just don't click with all people.

> We tend to be less "exactly" assigned to dissertation than the people in the sciences and the humanities. We just about have interchangeable parts in education. If you need to get a committee together, people will say "get somebody interested in --" but how exact is that? My impression is not very. It ends up more a committee of convenience, also there are guys who end up with reputations "keep 'em off" or "keep 'em on" I think some of the guys that you're talking with serve on just an enormous number of committees.

Chair responsibilities frequently mentioned were:

As a chair I don't expect my committee members to spend as much time on a dissertation as I do as the Chair. That's the reason I take that responsibility. I don't ordinarily have the student give the dissertation to the committee members until it's fairly well worked out.

There's an etiquette more than a procedure. The committee of which I chair, in most cases, the committee members won't see anything except the final product. The exception was a recent cost/benefit study where I was incompetent to evaluate the economics section, so we had somebody else reading along with me. In most situations, if I serve on the committee, I expect the advisor to have worked out all of the ambiguities and the redundancies and the poor writing, and to have done the editing. I expect the product to be a representation of the interaction of the student and the advisor.

Responsibilities as a committee member mentioned were:

Are you going to mention the fact that the duties and responsibilities of committee members have never been spelled out in most universities at all? That's why you get absolute confusion!

I wish you'd help the people who run universities know the immense complexity of having to be on many committees. There are hundreds of skills! I find it shocking the lack of time and energy spent on analyzing dissertations by committee members. And yet some of them just pride themselves on the number of committees on which they serve. Some are very helpful, but I've been at meetings where there aren't any comments.

I like working with the committee. I don't find a lot of my colleagues that like it, there are only two or three that really like a cooperative effort. I really like being on committees with them. I don't particularly like sitting on a committee where I'm expected to rubber stamp a dissertation. You're expected to put in a considerable amount of time--and you really have to watch yourself, because you feel like you're stepping on the advisor's toes, rather than being able to help the student. It's not very rewarding or fun--and even if you do identify some "gaps," there's no assurance that those will get dealt with, or that your input even counts. I think that it's almost a waste of a resource that you have available when you don't use them.

> I think students should select a committee based on many things, one is how much support they can give you, two is their expertise, and three is how well they're going to get along with the other committee members.

Two advisors mentioned the tendency of doctoral candidates to cite work of the members of the dissertation committee:

> I've probably known a couple hundred faculty people in the school of education and outside, and the first thing they do with a dissertation is to see if they're quoted. And, that's usually the reference the candidate forgot to put in the bibliography! It gets kind of strange and ridiculous, but you do have to say, "Hey listen, if your committee writes something in this area, you better have it in your bibliography, and you better know it."

> I had a situation one time where I was the cross campus person, and the guy had a two or three page segment on stress. His dissertation was tangentially related to stress, but not really so much that you'd put in two or three pages on stress research. In talking with the candidate I discovered that he put that in because he knew I was interested in stress. I think that's just dastardly. A lot of times you'll see that they're really reaching to put everybody on the committee in. You look at the bibliography and there's something you wrote, and I'll bet everybody on the committee has written something that's in the bibliography. You look in the second chapter, it isn't in the second chapter any place, but they found out what you had written and they included it in the bibliography, or they mention it someplace, and you look at the mention and you think, now what does that have to do with this study? That kind of stuff is irritating whenever you run into it. To me it would be an indicator of somebody who's not taking the chapter seriously. It's really a put down to the faculty to do that kind of stuff.

Reading the Dissertation as a Committee Member

I asked the advisors how they read a dissertation when they were committee members. The majority said that if time permitted, they read it cover to cover, but there were some unique reading behaviors that did not follow this sequence. Over half specifically commented

that they generally didn't read the literature review, others indicated they skimmed the literature review and preferred to read other chapters in depth. Time was the critical factor:

> If I get it in time I'll read it. If I don't get it in time, I'll read the conclusions and take a look at the statistics, and then go back and see it there's any sensible hypothesis, and if it was generated from a solid base, or if it was a "gee whizzer" or whether there was anything that would indicate it was theoretically based.

Their role on the committee might influence their reading:

> My examination as a committee member depends on many things. If I'm an outside committee member, I have to put on a whole different pair of glasses, but it will be merely to scrutinize more carefully in relation to what I do as a committee member ordinarily: judging what the shortcomings are, what the strengths are and how the dissertation is presented. One of the exceptions to that is where someone else would be the chair in name, but by the nature of the dissertation, and the fact that I am somewhat of an expert in research methodology and statistical analysis and what have you, I would be the chair.
>
> It would depend on why I was on the committee. If I was on the committee because I am interested in descriptive research, then chances are I'm trying to help out with method, and I'm looking mostly at the method chapter, or help perhaps more in the proposal stage when a student was trying to think through how you talk about what your method is going to be in a way that makes sense to people who aren't committed to it. It could depend whether I'm on simply by reason of being a member of a particular faculty in the foundations area, chances are I'm one of the ones that gets asked to be on committees. If it's something one of my colleagues is working very closely with, I'll keep my distance. Then, I would probably read the whole dissertation and maybe be more inclined to work as a critical reader/editor, and let somebody else handle the substance of it.

The reading sequence varied from "cover to cover" for the next four advisors. This advisor skipped around:

Sure, I read differently as a committee member. I'll start with the abstract, go to the summary, conclusions, then look at the table of contents, and then back to see if the summary and conclusions are supported by the data. Sooner or later I'll look at the methodology. So, I'll move back and forth, and probably in that order: abstract, summary and conclusions, design, and then the introduction.

This advisor read the literature review first:

I really do! As a committee member I usually read the review chapter first. I look upon it as an opportunity to get an easy instant expertise sort of thing. So, I don't read the literature review very critically as a committee member. I read it more because all I know about the topic, when I finish reading it in terms of background, is what I get from the dissertation. If I read the literature review first, and it stimulates my interest in the rest of the dissertation, or it makes me feel like I understand where the problem is coming from, then it seems like a pretty good review to me. Occasionally you'll run across a review and then when you go ahead and read the methodology and then go back and reread the introduction, the review doesn't seem to have much to do with either of those things. Sometimes I will raise questions about that.

This advisor never reads the literature review:

The only reason I don't read the literature review is because I assume the advisor has helped on that. A lot of times it's of no interest to me, and I'm not particularly interested in the literature, and there's not much I can say as to whether studies are significant or non-significant.

This advisor preferred to read the fifth chapter first:

I generally read the fifth chapter first, because that's kind of a summary of everything. Then I look at a couple of tables, knowing nothing about the study, just grab a couple of tables at random. A table ought to be able to stand by itself, without supportive text. Now, if I look at those, and I see that everything looks like it's in pretty good shape, then I just sit down and relax and enjoy reading it. On the other hand, if the fifth chapter isn't clear, and there's a lot of bad writing, grammatical errors, and the tables are a disgrace, then I get

> myself a whole bunch of pencils, and I realize it's going to be a long day. I can get very picky.

The unique reading sequences described by the minority of advisors interviewed, and the comments from over half of the faculty that they do not generally read the literature review, suggest that the important literature ought to be paraphrased, cited, and discussed throughout the dissertation.

Personal Doctoral Experiences Affecting Advising Behaviors

I asked the advisors to reflect on their own advising behavior since the first dissertation they chaired. Their comments were equally divided, half had changed advising behavior since their initial experiences, and half had remained the same. The following comment is representative of advisors who have not changed their advising:

> No, I haven't changed, and I won't change either! Just knowing the quality of my own work, the way I write, and the way I design, anyone studying or working with me knows--I tell them, "this is what I expect" and they say, "great, that's why we're here." I am very critical, and I really take it very seriously. I like learning through dissertations, I want to make sure that it comes through as a quality document written well.

The comments that follow reflect advisors who have changed:

> I think I've learned a good deal about how to anticipate problems in dissertations. And, I think I've become a little more skilled in dealing with people. However, I'm still at a loss as to how to get somebody to synthesize and assimilate what the research says, or what the literature says when they don't understand.

I'm more tolerant of the less adequately prepared student, even though the less adequate the student is, the more difficult it is for the advisor and the committee members. I'm working with a student from Libya right now, and one cross campus advisor said, "I don't think I should work with him because the level of that man's work is going to be such that I won't feel good about it." I said, "I don't think you ought to be on it either, I understand what you're talking about, I've worked with him for five years, and I probably have more tolerance and may even be less demanding that you would feel professionally comfortable, so why don't you just bail out?" And he did. I know that if he ever gets this thing written, it won't be a giveaway, but it certainly isn't going to be one of our greater offerings to academe. I don't deal with it very well, but I'm trying to get past the fact that we get mixed up in this business of rigor and hardness and quality. I think you have to recognize that there are some people in the doctoral program who aren't as good as others.

I've gotten more hard-nosed. Often in the literature review chapter you have an opportunity to help the students with their writing in a way that you might not in the other parts. That really is an area where they take a whole array of disparate studies and odds and ends, and they try to put them together in some kind of organized whole. That's an important skill for people to have throughout their professional career.

I think you have to learn the process of how to chair a dissertation. In a certain sense, the dissertation puts the faculty members at risk as well as the student. If the student really screws up, it's the faculty member who will catch the flack. I've learned that I'd have to spend some time thinking about how supportive to be to some students who are very naive. I've gotten more directive. I'm increasingly reluctant to get involved in areas that I don't know about. Wisdom requires experience.

I think that now I want a more thorough literature review than I did during my first doctoral candidates. It was about the second or third candidate when I really started to think in my own head, what are they trying to do here? That's when I started coming up saying, "You need to show that you understand the field, cite the key things, and show them where the gaps are."

The Advisor's Own Dissertation Experience

I asked the advisors to reflect on their own dissertation experience, and to comment on any portion of that experience that may have influenced the way in which they work with doctoral candidates. Over two-thirds of the advisors, after reflection, volunteered that they advised the writing of the literature review the way they were advised. If their advisors left them on their own to complete the literature review, they left their doctoral advisees on their own to complete the literature review. Most spoke very favorably and fondly of their doctoral experience, and of their continuing relationship with their advisor, such as the following recollection:

> I had a very very good advisor who really I think set the model for the way I advise. I felt as though I really didn't know how to write. I certainly didn't know how to write a technical dissertation that would survive a committee. Also, there were very few women studying--so that was another thing--it usually meant you had an all male committee who didn't like it too well that women were entering the citadel. When I started studying there, people from the school of education, and particularly women, were not allowed to take courses in the main university.

One mentioned the new technology while he was a doctoral candidate:

> Notes, I took notes all the time. I carried 5x8 cards or 4x8 cards in my pocket. And in the middle of the night, whatever, reading, it was all notes. Then, xerox machines came, and I think we all went "xerox-happy"--you know, you blow your nose and they want to xerox it.

Another advisor mentioned the change in dissertation length:

> In those days dissertations were longer. My dissertation was 400 some odd pages. And that all had to be typed with carbon paper! They don't write dissertations like that now. Now they push for shorter dissertations, but I don't urge my students one way or another.

One advisor talked about the first advising experience:

> I can always tell you the design that any faculty member around here used for his or her dissertation if you show me the first dissertation they advised, because it looks very much like theirs. I don't see anything wrong with that, because that's the technique they understand the best. And any candidate who's going through the process--and it's the advisor's first candidate--would be well advised to go with whatever the advisor feels confident about.

The Advisors' Responses to Technological Changes

The rapidly changing technology for retrieval of information concerned more than half of the advisors. The concerns centered around misunderstandings of the strengths and weaknesses the technology offered. The examples the advisors used to illustrate their points of view were actually criticisms of indexing practices, and the routine assignment of subject headings or descriptors, something that has been going on in libraries for centuries. Access to machine readable records merely permits the additional manipulation of the information in the record in more ways than printed indexes traditionally allow. The advisors' criticisms of computer searching indicated a lack of understanding of the process. This may be due to their own doctoral experience. Schumacher's (1986) analysis of images

of computer searching in seventeen educational research textbooks published between 1975 and 1984 showed that the depiction of database searching varied greatly, both in emphasis and in accuracy. He concludes by stating that graduate students in research methods courses do not always receive [from the texts] the types of information concerning database searching services that librarians would like them to have.

The comments from advisors in the study group indicated that much of their knowledge regarding computer searching came from passive acceptance of printed search results from doctoral candidates. Only two of the advisors mentioned actively pursuing computer searches. The majority delegated the task and routinely sent students, advisees, and colleagues to the library for computer searches. The computerized literature search was mistrusted:

> Personal prejudice of mine--I don't really know enough to speak competently about computer searches. The only computer searches I'm aware of are the things that sometimes students bring in and say, "Look at all the stuff that got kicked out--what do you think is going to be most relevant for me to look at?" And I'll say, "Nothing there, use your noggin for crying out loud!"
>
> I imagine there are some grand benefits to computer searching, and that's just an aside. But based on what people show me, and it's interesting because just yesterday someone came in with one of those damn things, and I just had to laugh, the stuff that came out of that, I mean it's garbage in, garbage out. I don't know how stuff gets classified on the computer. I don't know who reads what and where. If you want to know about what I've written an article on, and the 100 footnotes on it, that doesn't come out of your computer. I don't know who computes what and who puts it together or anything like that. I don't know at what level that's useful.

The comments criticize the computer search results, in much the same way a photocopy of a printed bibliography could be criticized. One is never certain of the quality of a bibliography--but it is easier to criticize a machine than a person. This reflects the pattern discussed with drafts of the literature review; in other words the advisors seem to prefer to react. A doctoral candidate may be drawn to a detailed lengthy computerized literature search, even if it is not appropriate, because of lack of skills in how to use the reference sources, fear of missing important information, or library anxiety--the fear of looking inadequate by asking for information.

Another concern seemed to be a futuristic prediction of loss of control, and the following thought-provoking comment seems to sum up what many people fear:

> I have a feeling that as we get slicker and slicker with computer searches and all, the review itself is going be less a measure of a students ability to do anything--even to work hard. All that it is now is that you've got enough bucks, and you find the right librarian, and the librarian does all the thinking. So if you know my inclination is to rely less on this rather than more. But to hope, and here's the part--hope that somehow the student finds at least most of the very relevant stuff.

Conclusion

This chapter reported the literature review advising behavior of thirty three faculty advisors who had collectively chaired over six hundred dissertation literature reviews. Their reported advising patterns included: (a) selecting a dissertation topic in a subject area the advisor feels comfortable advising; (b) focusing on four

preferred formats of information: refereed journals, books, dissertations, and the Resources in Education portion of ERIC; (c) locating the literature review in a separate chapter or weaving it throughout the dissertation depending on advisor and committee preferences; (d) assisting doctoral candidates in writing what may be an initial experience in extended synthesis writing.

Their comments suggest the existence of an unverbalized, undocumented zone of tolerance of acceptable established norms for effective literature reviews. This zone of tolerance includes: (a) the years of material covered in the literature review; (b) the length of the literature review; (c) the appropriate length, in relation to the whole, of each topic discussed in the overall literature review; and finally (d) a writing style that communicates clearly and synthesizes material, which in turn provides an enjoyable and educational experience for the reader.

CHAPTER V

CONCLUSIONS

This dissertation examined the advising behaviors of thirty three advisors at a college of education in a medium sized research university in the Pacific Northwest. Each member of the study group had chaired at least three dissertation committees within three calendar years of the study, and/or taught one of the core research courses in the college.

A review of literature is generally considered to be an essential part of a dissertation. The scope of the literature review varies with the area under study. The literature review in education disciplines is often separate, and commonly appears as the second of a five chapter dissertation.

The process of writing the dissertation provides a unique interaction among advisors, doctoral candidates, and librarians. It was this interaction that led to the creation and execution of this dissertation. I was one of the librarians at the university who helped faculty select library materials, answered questions at the reference desk, performed computerized literature searches for faculty and students, guest-lectured on literature searching techniques, and taught a course for graduate students on literature searching in education. The variety of interactions on many levels with both

faculty and graduate students during the various stages of the dissertation process provided a window to the dissertation literature review experience, but it also raised questions about the behaviors of graduate students and their advisors. Graduate students often seemed to be caught between their own knowledge and the advice given by the librarian, other graduate students, their advisor, and their dissertation committee. They soon discover that their advisors' opinion is the one that counts the most.

An examination of the literature on advising education doctoral candidates in the completion of the literature review produced sparse results. Chapter 2 discusses the literature on advising that exists. In brief, the research literature identifies the literature review as an area of concern, but it provides little in the way of solution. Self-help books aimed the graduate students provide misleading and incorrect information. Faculty advisors appear to learn their advising styles from the oral traditions of acceptability described by tenured members of the department, but most often depend on their own dissertation literature review experience.

This dissertation, consequently, focused on active college of education advisors, and asked them direct and specific questions regarding their advising behavior during the preparation of the literature review portion of their advisees' dissertations.

The design of the study (see Chapter 3) involved a preliminary questionnaire (see Appendix A) that provided the initial data for the interview, which served as the major data base. The interviews were

taped and transcribed, and traditional content analysis techniques were used to analyze and synthesize the comments. The faculty advisors appeared very open, candid, and honest in discussing the advising beliefs and procedures they used during the literature review portion of the dissertation. It was a time for personal reflection on relationships with former advisees and colleagues, on favorite dissertation topics, and on their own dissertation experience. All seemed to genuinely enjoy the interview.

Principal Findings

Advisors reported the following behaviors during the literature review portion of the dissertation in the College of Education:

1. The advisors reported that they have preferences for the kinds of dissertations they will advise. Some will agree to advise dissertations in a broad scope of topics within education, putting the burden on the advisee to educate the advisor in the literature of the field; others will agree to advise dissertations only in limited narrow topic areas within education, generally their own field of expertise. The advisor's preference for a subject area is often coupled with a preference for the methodology of the dissertation (e.g., historical, experimental, descriptive, etc.) which may also affect the literature review.

2. Advisors prefer to work individually with their advisees to define such factors as focus, format, areas to be discussed, and the length of the dissertation literature review. The other committee

members generally react to the decisions of the advisor and candidate, but do not participate in making them.

3. Advisors rated some sources more productive than others for dissertation literature reviews in education. The four sources rated most productive were: refereed journals, books, dissertations, and the Resources in Education portion of ERIC.

4. Advisors reported that they had to deal with a wide range of specific problems during the early stages of advising a dissertation literature review. These included defining the nature and amount of related literature, the advisees' ability to locate the relevant literature, and their own possible limited knowledge of the advisees' dissertation field.

5. Advisors reported that the writing of the dissertation literature review often caused advising problems. These included the inability of some candidates to organize and synthesize large groupings of literature, and to write an effective literature review.

6. The advisors ranked the literature review lowest of five identified elements of a dissertation in the amount of time/energy they expended, and in the level of their expertise.

7. The advisors reported different behaviors when they served as committee members. Half of the advisors in the study group reported that they carefully read the rest of the dissertation, but tended not to read the literature review. Others reported skimming the literature review, and carefully reading the other portions of the dissertation.

8. Advisors reported that their own dissertation writing experiences had a major influence on their own advising beliefs and behaviors.

9. Advisors reported that dissertation literature reviews in the college of education should focus on what many identified as "representative literature" and should not attempt to be comprehensive.

10. Advisors reported they were uncomfortable with and distrustful of the new searching technologies--and some indicated an almost complete lack of understanding of indexing philosophies or appropriate use of computer search results.

Conclusions, Implications and Recommendations

The findings emerged from questionnaire data and over fifty hours of taped interviews that were carefully examined and contemplated in their aural and written forms. The following conclusions, implications, and recommendations are drawn from this experience.

This study group of faculty advisors in a college of education did not place a high priority on advising for the literature review, even though all their advisees' dissertations had a literature review. Possibly this is because the focus in a research university is on research methodologies, and advisors pride themselves on the unique way of approaching some of the repetitive problems that have long existed in education. They may see the literature review as the most routine portion of the dissertation, and may feel that their advisees

have other sources of support for the completion of this portion of the dissertation. In essence, if the advisor knows the literature, it is relatively uninteresting to go through it again. If the advisor is not familiar with the literature, the advisor's help is often limited to asking questions about whether or not the search represents key factors of the topic. In either event, the advisors seem to consider the design and methodology of the dissertation problem to be more interesting.

Although many doctoral candidates have the research and writing skills to develop an acceptable literature review, some do not--and all advisors related at least one such experience. Their general orientation was to encourage their advisees to do the literature search and writing on their own, or with whatever help they needed and could get. The advisors worked patiently with those who still needed help--although they were not pleased about it, because they assumed that doctoral candidates should have such skills.

When they served as dissertation committee members, the advisors admitted that they may not read, or may merely skim the literature review portion of the dissertation. This may be because they are often familiar with the subject area of the dissertation and feel that they have nothing to learn from the literature review, or they may be uninterested in the topic. Further, the chapter has a reputation for being poorly written, and so they choose not to spend their time on it. They essentially delegated the detailed reading of the literature review to the dissertation committee chair.

The proliferation of new journal titles in narrow disciplines and the rapid development of new technologies that permit access to this information exacerbate an already overwhelming situation for these advisors. The library searching skills they learned in their doctoral program are dated. This reflects the changing set of survival skills during the transition from being a doctoral candidate to being a member of a university faculty. Doctoral candidates must learn a series of survival skills varying from using the library to using the university's computer system, and they probably will not get much help from their advisors, unless the dissertation is closely related to the advisor's current interests and scholarship.

This suggests that the college should examine its doctoral advising procedures and policies, focusing especially on: (a) the role of the literature review in a dissertation; (b) appropriate dissertation committee member behavior; and (c) the differences in advising for Ph.D. and D.Ed. doctoral candidates.

The university library should be proactive about teaching graduate students the appropriate use of the library at the doctoral level. The library needs to invest in competent staff who can respond to user anxiety and offer quality bibliographic instruction, tied into the university's graduate programs--especially those in the college of education, as it produces the largest numbers of graduate students in the university. The college of education faculty should participate in regularly scheduled inservice workshops that focus on the uses of new information technologies.

The current doctoral admission criteria include a request for a sample of the student's "scholarly work." However, the writing is naturally not expected to be at the dissertation level, and members of the admission committee may not have the same standards as dissertation advisors. The current policy does not always identify the potential problem cases--those doctoral candidates who concerned the advisors in this study. The admission policy should be reexamined.

Graduate Education is currently in an era of reform, with reports such as Tomorrow's Teachers from the Holmes Group (1986). None of these suggest that the graduate curriculum should include skills in locating, organizing, and synthesizing information. The results of this study beg to differ.

Suggestions for Further Research

The results of this study suggest many avenues of future research. These include:

1. This study used the active advisors in the college of education of a research university. Other studies could: (a) expand this sample using the basic data to devise a questionnaire that could be sent to many advisors in many colleges of education; and (b) study faculty members from other disciplines.

2. This study found that the literature review portion is ranked lowest of five identified elements of a dissertation. This phenomenon should be studied in more depth.

3. This study noted a transition period between older and newer strategies and technologies for accessing information, ranging from paper indexes to computerized literature searching. This phenomenon could also be examined in a number of ways.

4. This study approached the literature review from the perspective of the advisor. Other studies could explore the view of doctoral candidates concerning the literature review portion of the dissertation.

5. This study noted the advisors were concerned about the synthesis and writing skills of many doctoral candidates. The current technological period of transition, and lowering costs of computers, invite a study of how the process of advising dissertation writing has changed since word processing has simplified editorial changes.

Rite of Passage?

This study suggests that advisors consider the literature review of the dissertation a step during rite of passage. The metaphor dictates that doctoral candidates "go off to the library" and complete the task as a solitary isolated experience, and bring the results back to the elders (their advisors) for comment. This is part of the culture of academe. Boyle (1986) in his study, The Psychology of Doctoral Degree Candidacy: A Conceptual Model and an Experimental Application, suggests the use of metaphors to help guide doctoral students through completion of the dissertation:

> In my view, the most important use of the existential rite of passage paradigm was as fertile soil for generating insight-producing metaphors that addressed the concepts of pilgrimage and transformation. Such metaphors ranged from simple comparisons to lengthy allegorical tales. For making sense of the candidate's need for painful exhausting struggle and the appropriateness of a dissertation advisor's benign neglect, a story I heard on the radio and shared in the group was particularly useful:
>
> An old man and his grandson were leaving their village for the river where they would gather water for the family's needs. The boy stopped near a bush, distracted by a cocoon that was beginning to open. When his grandfather called for him to move along, the boy pleaded to be allowed to stay and watch the cocoon open. Once a boy himself, the grandfather smiled knowingly and said that he would fetch the water and pick the boy up on his return. As he headed toward the river, he called back over his shoulder with an afterthought. "Don't help the butterfly out of the cocoon," he said, and then he went down.
>
> The boy sat down, made himself comfortable, and watched intently. He saw periods of great activity that would open the cocoon ever so slightly. He waited impatiently through long periods of inactivity and he wondered if the butterfly had died. He watched and waited so long that he began to worry that the butterfly might never survive to emerge from the cocoon. He remembered his grandfather's parting words, but when the job seemed so close to finished, he could no longer help himself and he reached out to pry open the cocoon and release the butterfly.
>
> When the grandfather returned and saw the boy crying over a dying butterfly that flapped its wings aimlessly upon the ground, he sat down and put his arm around the boy. "You opened the cocoon, didn't you?" "I'm sorry," he went on, "I should have been in less of a hurry and stayed with you long enough to explain myself. You see, the only way a butterfly can make its wings strong enough to fly is by beating them against the inside of the cocoon until it is opened. It is something he must do all by himself in order to become a butterfly." (pp. 117-118)

Like the grandfather in the metaphor, advisors, librarians, editors, and counselors should view their role in the "doctoral dissertation as rite of passage" as one of informed assistance. In this way, the doctoral candidate learns the skills, and gains the strength, to prepare a well written literature review. Together, elders in the culture of higher education need to make provisions to

assure that future doctoral candidates all have successful strong flights after completing the literature review portion of their dissertation.

APPENDIX A

PRELIMINARY QUESTIONNAIRE

1. _____

PRELIMINARY QUESTIONNAIRE

I. Faculty Background

_____ Year you joined the University of Oregon Faculty

_____ (approximate) number of your doctoral advisees who have completed the program.

_____ (approximate) number of doctoral committees you have served on in which you were not the candidate's major advisor.

_____ number of current doctoral advisees.

II. When doctoral candidates go to the library to locate information on a dissertation topic, they use a collection of search tools ranging from the table of contents in books to computerized literature searches of relevant databases.

List below those basic search tools that you consider to be **most important**—that you feel **must be used** in **any College of Education Dissertation.**

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

2. _____

III. Listed below are 15 common ways in which educational opinion and research are disseminated. Think about the dissertation searches you have advised or reviewed as a committee member. From that experience, rate the value of each format or source on a 5 point scale, with 1 being very productive, and 5 being very unproductive.

_____ Books or Monographs (e.g. Bloom's *Taxonomy of Educational Objectives*; Kerlinger's *Foundations of Behavioral Research*; Bok's *Beyond the Ivory Tower: Social Responsibilities of the Modern University*)

_____ Subject encyclopedias (e.g. *Encyclopedia of Education*; *Encyclopedia of Educational Research*; *International Encyclopedia of Higher Education*)

_____ Refereed journals (e.g. *American Educational Research Journal*; *Journal of Counseling Psychology*; *Journal of Educational Measurement*)

_____ Popular professional journals (e.g. *Instructor*; *Psychology Today*; *American School Board Journal*)

_____ Popular mass circulation journals (e.g. *Time*; *Atlantic Monthly*; *Parents Magazine*)

_____ *Resources in Education* (the fiche portion of ERIC)

_____ Conference Proceedings

_____ Yearbooks (e.g. NSSE; ASCD; AECT)

_____ Newspapers (e.g. *Chronicle of Higher Education*; *Education Week*; *New York Times*)

_____ Research Center Reports (e.g. Center for Educational Policy and Management [U of O]; Boys Town Center for the Study of Youth Development [Boys Town NE]; Speech and Hearing Institute [New York])

_____ U.S. Government Agency Reports (e.g. National Institute of Education; National Labor Relations Board; National Science Foundation)

_____ State Department of Education Reports

_____ School District Reports

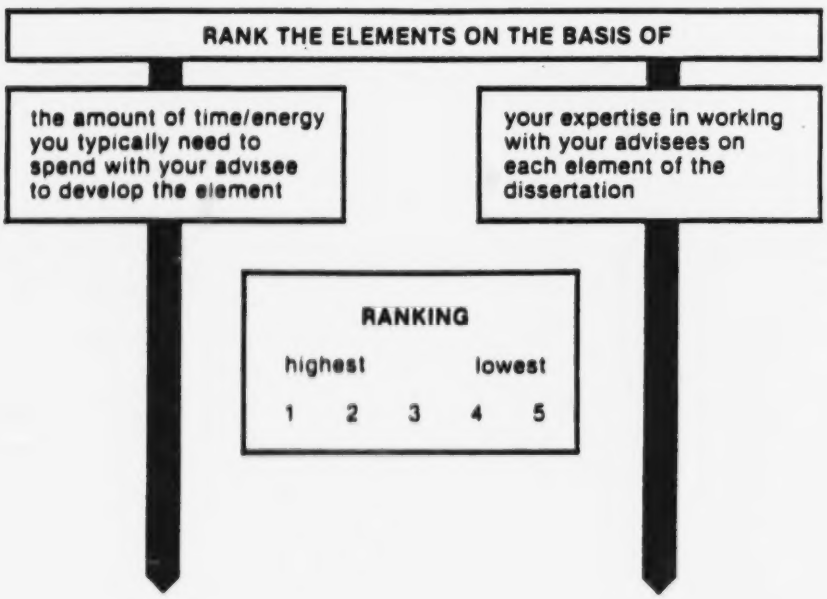
_____ Legislative material (U.S. House or U.S. Senate)

_____ Dissertations

_____ Other: _____

3. _____

IV. A dissertation is generally composed of the five elements listed below:


RANK THE ELEMENTS ON THE BASIS OF
the amount of time/energy you typically need to spend with your advisee to develop the element
your expertise in working with your advisees on each element of the dissertation
RANKING
highest
lowest
1 2 3 4 5

_____	The introduction: the social and educational context of the problem that defines the dissertation.	_____
_____	The literature search; the opinion and research literature base of the dissertation problem.	_____
_____	The design and methodology of the dissertation study.	_____
_____	The analysis and presentation of the dissertation findings.	_____
_____	The drawing of conclusions, implications, recommendations from the dissertation study.	_____

APPENDIX B

TABLES DESCRIBING MEMBERS OF THE STUDY GROUP

Table a. Date members of the study group received their doctoral degree.

	Male	Female	Total
1950-54	2	0	2
1955-59	5	1	6
1960-64	7	1	8
1965-69	5	0	5
1970-74	5	2	7
1974-79	4	1	5
Total:	28	5	33

Table b. Date of initial employment of members of the study group at the study site.

	Male	Female	Total
1950-54	2	0	2
1955-59	0	0	0
1960-64	6	1	7
1965-69	7	2	9
1970-74	5	0	5
1975-79	8	2	10
Total	28	5	33

Table c. Current Rank of members of the study group.

	Male	Female	Total
Assistant Professor	3	1	4
Associate Professor	9	2	11
Professor	16	2	18
Total	28	5	33

Table d. Type of Doctoral Degree received by members of the study group.

	Male	Female	Total
Ph.D.	22	4	26
Ed.D.	3	1	4
D.Ed.	3	0	3
Total	28	5	33

Table e. University doctoral degrees represented by members of the study group.

East		
Harvard University	1	
New York University	1	
Total		2
Mid-West		
Michigan State University	1	
Northwestern University	1	
Ohio State University	2	
University of Chicago	1	
University of Iowa	3	
University of Michigan	2	
University of Wisconsin	2	
Total		12
West		
Arizona State University	1	
Stanford University	2	
University of California	3	
University of Oregon	11	
University of Utah	1	
University of Washington	1	
Total		19

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